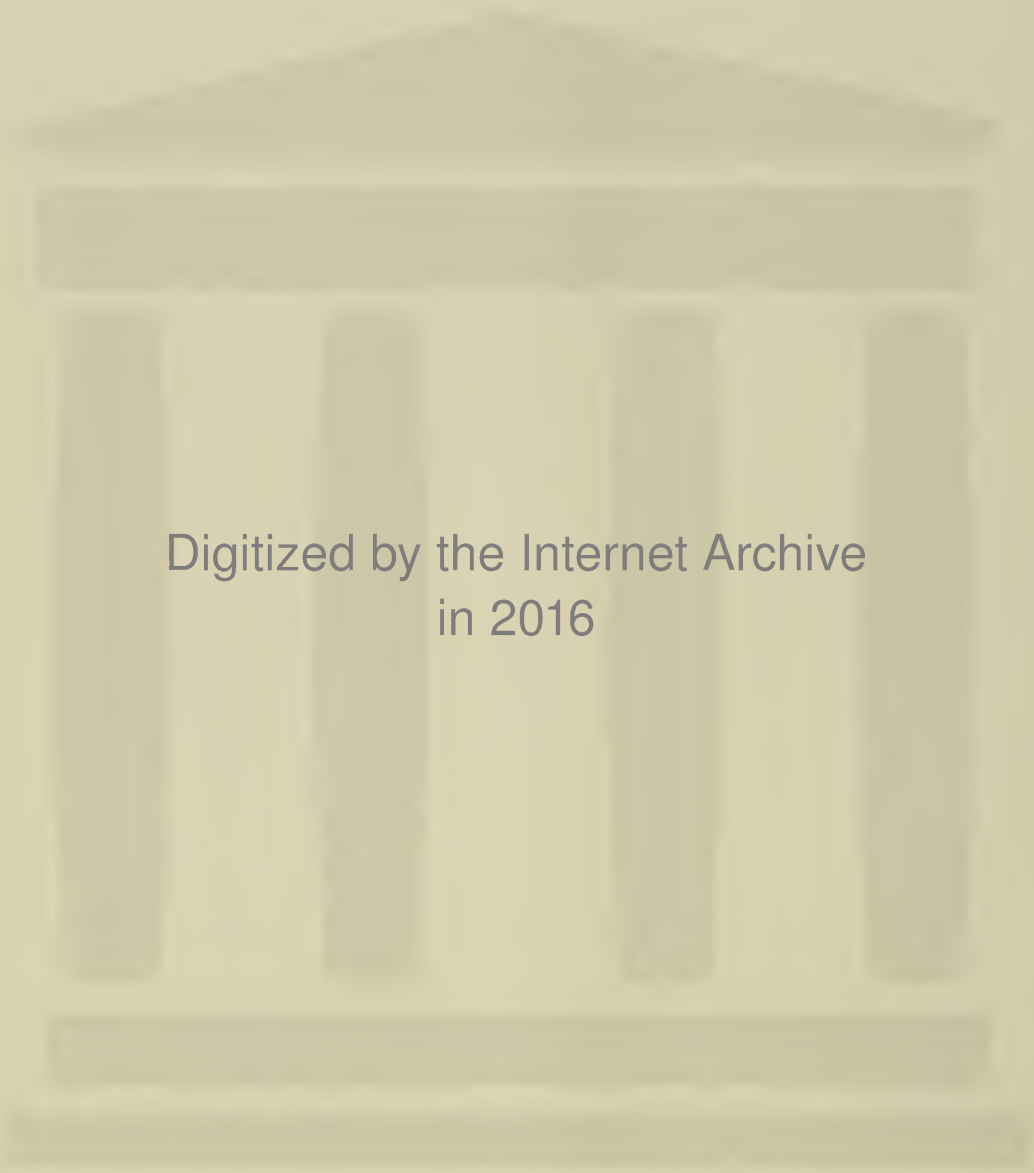
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NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION
JACKSON, MISSISSIPPI

January 1965

Dear Doctor:

Forty-seven of the 50 state legislatures will soon meet, and observers say that biggest health issue will be drug laws. Pharmaceutical Manufacturers Association forecasts that hundreds of bills will cover so-called "dangerous drugs," sampling practices, licensure for all distributors, state narcotics control, and even mandatory generic prescribing.

> At least nine states will consider "dangerous drug" laws, mostly patterned after far-reaching Ohio statute. Measures would require distributor licensing, including out-of-state manufacturers, and give boards of pharmacy tight reins over sales.

Almost missing the headlines was defeat on Nov. 3 of sweeping constitutional amendment in health field by Louisiana voters. Proposal would have increased Pelican state board of health to 12 from present nine members by adding three laymen. Sponsors, who were mostly dairymen and restaurant owners, took 231,000 to 152,000 trouncing at polls.

All the nuts aren't in the pecan orchard, as evidenced by the U.S. Department of Health, Education, and Welfare's latest "scientific" research project. Press reports by UPI say that the federal agency is sponsoring formal, fund-supported investigation on palm reading. HEW explanation is to find out if correlation exists between palm patterns and certain neurological diseases.

Physician-candidates for Congress fared badly in the November general elections with 11 out of 14 losing bids for seats. Dr. Thomas E. Morgan (D.,Pa.), chairman of the House Foreign Affairs Committee and a fedicare supporter, defeated another physician who had AMPAC support. Dr. Durward G. Hall (R.,Mo.) was re-elected, and one newcomer, Dr. Tim L. Carter (R.,Ky.) was successful in initial try.

Alarmed with the rise of V.D. in England, the British Medical Association has beamed a new education campaign directly at teenagers. BMA has published a booklet, "V.D. - the Facts," and in a most un-British manner, is selling it on newsstands for one shilling (14 cents). In U.S., even the TV networks have banned reference to V.D. on grounds it is "not a polite subject."

Sincerely,

Rowland B. Kennedy
Executive Secretary

DATELINE - MEDICAL AMERICA

Residency Programs Narrow In Scope

Chicago - Almost half of the nation's 29,000 plus residents are training in three specialties. More than 14,000 residents are seeking board eligibility in general surgery (5,656), internal medicine (5,129), and psychiatry (3,274). Fewest among specialty groups are in opthalmology with 969 residents filling 95 per cent of all approved training positions. Of all U.S. physicians, 11 per cent are in approved residencies, and trend is distinctly up.

Massive Program On Cancer, Cardiovascular Disease Is Urged

Washington - President Johnson's study commission on heart disease, cancer, and stroke has recommended a $2.9 billion program "for clinical investigation, teaching, and patient care," a 300 per cent increase over funds now devoted to these fields. Project, to be placed before Congress, would establish network of 60 special centers in universities and hospitals, and secondary network of 450 "diagnostic and treatment stations." AMA has withheld comment on proposal but will speak when legislation is introduced.

Dental Home Care Program Is Hailed Successful

Cleveland - A pilot program of bringing comprehensive dental care into private residences and nursing homes for the chronically ill and aging has proved highly successful. Sponsored by the Cleveland Dental Society in cooperation with local groups, private practitioners make calls using portable equipment and specially trained assistants. Program is based at a local hospital which maintains outpatient dental clinic.

Shift In Federal Grants To Medical Schools Is Seen By AAMC

Evanston, Ill. - The Association of American Medical Colleges says that profound shifts in federal funding of medical education have occurred concomitantly with increases. First made in 1948, about $1.6 million was earmarked for undergraduate training and only $48,000 for research, a ratio of 97-to-3. In 1963, teaching got $7.4 million, and almost $75 million went to research, a shift to 10-to-90.

Mills May Still Be Key To 'Fedicare'

Washington - Capitol Hill observers believe that House Ways and Means Chairman Wilbur Mills (D.,Ark.) is still the key to success or failure of fedicare, even in view of overwhelming odds in its favor. The powerful congressman was recently quoted as saying that he opposes the Social Security principle, but might be willing to support a separate tax, calculated separately from Social Security, and on a different wage base.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
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ORIGINAL PAPERS

The Dimensions of Narcotism: A Study of Medical and Social Policy

JOHN B. HOWELL, JR., M.D.
Canton, Mississippi

"The discovery and perfection of the hypodermic needle in the mid-19th century brought mixed blessings," writes the author. "Assuredly, it contributed to the rise of narcotic addiction."

Beginning at this point in time, Dr. Howell considers the social, political, and scientific history of the past century as it relates to narcotic addiction in the United States. He considers AMA and MSMA policy, the development of pertinent laws and enforcement agencies, and the beginning of specialized treatment facilities. In this paper, which opened the Symposium on Narcotic Addiction, Dr. Howell defines the dimensions of narcotism and emphasizes that MSMA "actively seeks the interest and understanding of the public, the support of experienced civil authority, and the reunification of the profession to make narcotic addiction a forgotten relic of a tragic past."

NARCOTIC ADDICTION in the United States is a medical and social problem of staggering dimensions. It is not easily understood. Its victims cannot be trusted to help themselves. It proliferates in riches as well as in poverty. Nearly every addict must sense the futility of his condition, and society has generally failed to appreciate what science knows must be done to meet the problem effectively.

ETIOLOGY

The precise etiology of narcotism is not known. It is, however, correctly described as a state of periodic and chronic intoxication, detrimental to the individual and to society, produced by the repeated consumption of a drug. It is characterized by an overpowering desire or need to continue taking the drug and to obtain it by any means, a tendency to increase the amount taken, and a psychic and often physical dependence upon the effects so produced. The dependency mechanism is not understood, but it becomes forcefully apparent when the addictive agent is abruptly withdrawn.

There is a profound difference of opinion among reputable authorities as to whether narcotic addiction is a disease or not. A review of the literature discloses two schools in this connection: First, that it is a disease and, second, that it is a symptom of a disease.

Somerville states that "drug addiction is a disease, a pathological condition just as much as the

Chairman, Board of Trustees, Mississippi State Medical Association.

Read before the Symposium on Narcotic Addiction, Section on General Practice, 96th Annual Session, Mississippi State Medical Association, Jackson, May 14, 1964.

psychoneuroses of any of the various toxic states." Maurer and Vogel believe that "all the research done on drug addiction within the past two generations indicates that it is not a disease but rather a symptom of personality difficulties, which, if they did not lead to drug addiction, would lead to difficulties of other types."

Isbell appears to have been one of the first investigators to advance the concept that addiction is a complex of pharmacological, psychological, socioeconomic, and other factors. He seems to view the two divergent theories with reservations, stating that "the theories of personality that are used to explain addiction are the same theories that are used to explain neuroses, psychoses, and character disorders. Since it is known that many persons with personality characteristics similar to those of addicts have never used drugs, it is apparent that factors other than personality must be operating. Furthermore, under conditions of equal drug exposure, one individual may choose opiates and another, alcohol. This implies some sort of specificity in the choice of drug addiction."

A special study group of the Mississippi State Medical Association took the position in 1958 that the etiology of addiction should be regarded as multifactorial. Socioeconomic, psychiatric, and pharmacological factors are prominent and play significant roles. Moreover, the importance of these various factors seem to vary from individual to individual and even influence each other. The group was further impressed that whether addiction is a disease or not, it cannot be considered apart from its disastrous effects upon society.

THE FINAL DIMENSIONS

Social, political, and scientific history of the past century provide the final dimensions in the discussion of narcotic addiction in the United States. The discovery and perfection of the hypodermic needle in the mid-19th century brought mixed blessings. Assuredly, it contributed to the rise of narcotic addiction. Many veterans who wore the Blue and Gray returned from the war whose centennial is now being observed as iatrogenic addicts. Indifferent, unscrupulous manufacturers of patent medicines loaded their nostrums with opiates, addicting thousands of unsuspecting Americans. Even a child with a dime could purchase narcotics over the counter.

Henry L. Giordano, the Commissioner of the U. S. Bureau of Narcotics, states that there were about a quarter of a million Americans addicted to narcotics in the early 1900's. And at that time, the greatest increases in addiction were occuring among women and young people. President Theodore Roosevelt fought for and secured passage of the first Pure Food and Drug Act in 1906. It was through his determined effort that patent medicines as sources of narcotics were largely eliminated. But there remained cause for concern, because no enforceable statute was available to regulate traffic in narcotics.

HARRISON ACT

In 1914, the Harrison Act was passed by the Congress with the support of the American Medical Association. Implementation and enforcement of the act was impeded by World War I, but the delay was not as detrimental as the casual observer might suspect. The incidence of narcotism has decreased dramatically during war years in the present century because of the close regulation of international commerce and security precautions.

But the federal government experienced difficulty in developing an effective regulatory mechanism in the immediate postwar years. At its June 1919 meeting, the AMA House of Delegates created a Special Committee on the Narcotic Drug Situation in the United States from which an edifying report was received the following year. As an outgrowth of these studies, a Standing Committee on Narcotic Drugs of the Council on Health and Public Instruction was created.

Despite its proper concern in the yet unsolved problem, the AMA assumed no formal position with respect to operation of the new law it had supported until 1924. The matter was debated for three years, and the point in controversy was treatment of addiction in outpatient or ambulatory clinics. As early as 1919, there were some 50 city and state clinics in 40 localities. Martin observes that "though they were established with the most humane and worthy motives, they proved to be a complete failure."

But the AMA understood the problem, and its delegates reached for a solution with singular purpose. At the 1920 New Orleans annual session, the newly created committee stated that "ambulatory treatment of drug addiction, as far as it relates to prescribing and dispensing of narcotic drugs to addicts for self-administration at their convenience, should be emphatically condemned."

Even if the medical profession had remained silent—which it did not—the clinics were doing a

good job of condemning themselves. They were a bonanza to addicts who apparently were able to name their dosage and secure it free or at nominal charge. Not every clinic patient kept his drugs for self-administration; some resold their drugs to other addicts. Many of the patients were found to have criminal records.

Between 1920 and 1923, the years when the ambulatory clinics flourished, the number of addicted convicts sentenced to Sing Sing Prison in New York increased 900 per cent over the year preceding establishment of the clinics. Nor did this bootless experiment take the profit out of illicit narcotics traffic. The quantity of illegal drugs seized in New York in 1922 alone was equal to the entire amount seized in the United States 30 years later in 1952. It was inevitable that city, state, and federal authorities would find themselves in agreement with the American Medical Association, and they closed the clinics by the mid-20's.

AMA POSITION

In 1924, the American Medical Association arrived at its final and strongest policy position, which, in fact, remains today the basic policy of medicine. The report stated that "your committee desires to place on record its firm conviction that any method of treatment for narcotic drug addiction, whether private, institutional, official, or governmental, which permits the addicted person to dose himself with habit-forming narcotic drugs placed in his hands for self-administration, is an unsatisfactory treatment of addiction, begets deception, extends the abuse of habit-forming narcotic drugs, and causes an increase in crime."

Concluding the indictment, the committee recommended that "the American Medical Association urge both federal and state governments to exert their full powers and authority to put an end to all manner of so-called ambulatory methods of treatment of narcotic drug addiction, whether practiced by the private physician or by the so-called narcotic clinic or dispensary."

The unstated inference as to how the problem may best be met, that is, treatment in a drug-free environment, is of equal importance with the damning positive pronouncements on the tragedy of the clinic experiment.

The U. S. Bureau of Narcotics was established in 1930 when the 16-year-old Harrison Act was revised and updated. The two federal hospitals for treatment of addicts were constructed in the late 1920's and initially opened for the care of federal prisoners only. Additional provision was soon made for the care of other addicts, and it is in these pioneering institutions that some of the most valuable work has been carried out in the development of in-institutional withdrawal regimens. All physicians, however, should recognize that much remains to be done in improving addiction therapy and in preventing such a distressing number of relapses.

A REALISTIC DEALING

In the span of two decades, the nation had come to grips with the addiction problem, dealing realistically with scientific, social, and legal aspects. The lessons of the 1920's were bitter, but there was a law, a common view in the scientific community, a needed enforcement agency, and a promising beginning in the development of specialized treatment facilities. World War II furnished an artificial inflation of success, because the number of known addicts characteristically diminished during 1940-1945.

The immediate postwar period saw an upsurge in addiction. An additional phenomenon was observed. Where, in prewar years, narcotic addiction was generally found among white persons, there was now a notable rise in the number of Negro addicts. By 1959, according to the Interdepartmental Committee on Narcotics appointed by President Eisenhower, 60 per cent of the known addicts were Negroes, 8 per cent were Puerto Ricans, and 6 per cent were Mexicans. This pattern of division by race and ethnic origin has remained essentially stable to the present time.

In 1952, the AMA published a report from the Council on Pharmacy and Chemistry prepared with the counsel of the respected director of the federal hospital at Lexington, Ky., Dr. Harris Isbell. This policy statement reaffirmed the 1924 pronouncement and spelled out the necessity of institutional care in treatment of addiction. It again condemned ambulatory treatment and the furnishing of narcotic drugs to addicts for self-administration.

At the 1954 San Francisco annual session of AMA, the New York delegation presented a resolution proposing legalization of distribution of narcotics to addicts under stated safeguards. Although never adopted, the resolution stimulated discussion and studies, culminating with a further and somewhat more liberal enlargement upon the 1924 policy. In a four point series of recommendations, the Committee on Narcotic Addiction urged:

—Improvement of care of addicts with emphasis on in-institutional programs, rehabilitation,

intensive post-institutional care, and revision of commitment procedures.

—Support for increased research on narcotic addiction.

—Rejection of ambulatory clinic treatment methods.

—Continued study of policy, suggesting in effect that in the light of new knowledge, the 1924 policy should be revised and broadened.

MSMA STUDIES

Independently of AMA and other groups, the Mississippi State Medical Association undertook extensive studies on narcotism in 1958 when the Board of Trustees created a special committee for this purpose. The following year, the Board approved the work of the committee, and the House of Delegates adopted a recommended policy position denouncing the ambulatory clinic proposal as scientifically unsound. Moreover, in-institutional care of the addict in a drug-free environment under medical supervision was supported. The association urged correction of causality of addiction where possible, rehabilitation, and assistance to the patient in effecting social redress. The position has been described as enlightened, and it has never been at issue.

MISUNDERSTANDINGS

Throughout the postwar decade in the 1950's, another cause for concern was observed in the legal and quasi-legal areas relating to narcotic addition. Widespread misunderstanding of the respective roles of medicine and the Bureau of Narcotics appeared. Many earnestly believed that the Bureau considered addiction a crime—a myth totally contrary to law—and that AMA was crusading for ambulatory clinics—a principle rejected by physicians 38 years previously. These misunderstandings were unfortunate, actually playing into the hands of some who would liberalize and weaken many hard won gains in the battle against narcotism.

It is regrettable but understandable that medicine's position may have, at times, been misconstrued. In the same context, instances of overly zealous enforcement measures and communications failures may have caused some doubt as to the objectives being sought by government agencies.

On May 14, 1962, a historic document by the American Medical Association and the National Research Council, a federally supported entity, was jointly issued. The myths of the 50's were debunked, and it was agreed that there should be provided the best possible treatment and rehabilitation services under conditions affording a drug-free environment and always under close medical supervision.

Both bodies declared that they accepted the historical premise that society has found it necessary to employ legal controls to prevent propagation of specified conditions which constitute a hazard to the public health. Narcotism is such a hazard. It was agreed that institutional care was required and that maintenance of stable dosage levels in addicts is generally inadequate and medically unsound. Successful treatment, they stated, demands extensive postwithdrawal rehabilitation and associated therapeutic services.

Commissioner Giordano promptly concurred in the joint declaration, hailing it as "an outstanding public service which will greatly advance the joint efforts of the law enforcement agencies and the medical-health organizations who are charged with responsibility for dealing with the narcotic drug problem."

AN INCREDIBLE REPORT

In April of 1963, the New York Academy of Medicine published an incredible report in which it declared that the Bureau of Narcotics regarded the addict as a criminal rather than sick person, dictated the practice of medicine, and insisted upon unsound treatment procedures. While the Academy is entitled to its views and opinions, however divergent they may be from those of the American medical scientific community, it was without justification in many of its allegations.

A plea was made in the report to recognize the addict as a sick individual; that this thesis should be the overriding and guiding principle in medical, legal, enforcement, and judicial matters relating to addiction; that the profit be taken out of the illicit narcotic traffic which seems to be a call for freely supplying the addict's needs; and that the Bureau bow out of the practice of medicine.

Even the respected *Wall Street Journal* took the bait and branded the Harrison Act a statutory flop, urging that there be a search "for ways in which the tragic incurables can be put on sustaining doses that will keep them from desperate acts."

A presidential commission only recently recommended that the Bureau be transferred to the Department of Justice and that its regulatory role on medical use of narcotics be given to the De-

partment of Health, Education, and Welfare. At its 1963 annual session, AMA restated its historic position but added in great detail guides for treatment of addicts. To a great extent, the policy was liberalized by this statement: "Many of the restrictions on the use of narcotics in general medical practice may properly be modified for the purpose of carrying out *bona fide* research activities since research creates special requirements. Such activities must, however, be carried out within the limits of ethical medical practice as applied to research."

Almost immediately, this recession in policy position was followed by an announcement from the National Association for the Prevention of Addiction of Narcotics, a New York based organization which is not primarily medical, that it would sponsor two pilot projects on ambulatory outpatient clinic treatment of addicts. More recently, the New York State Mental Hygiene Department announced that it will conduct a "stable dose" experiment with 20 selected addicts.

STATISTICS

More than 80 per cent of all known active narcotic addicts are located in four states, New York, California, Illinois, and Michigan, principally in New York City, Los Angeles, Chicago, and Detroit. Almost half are in New York. By race and ethnic origin, they are about 55 per cent Negro, 26 per cent white, 11 per cent Puerto Rican, 7 per cent Mexican, and 1 per cent all other groups.

At least 9 out of 10 addicts use heroin with morphine running a poor second choice. Other agents used are dihydromorphinone, meperidine, methadone, opium, and codeine. Seven to eight thousand new addicts are reported annually, but the total number has decreased from a quarter of a million just after World War I to about 50,000 today. Four out of five addicts are male, and 60 per cent are in the 20 to 30 age bracket. The cure rate is distressingly small, and the rate of relapse is over 90 per cent.

A CRUCIAL CHALLENGE

In reporting its studies and policy recommendations, the state medical association's Board of Trustees said that "the problem (of narcotism) is serious, dangerous, and complex, demanding urgent and decisive action to meet it effectively." The association believes that the succession of events over 50 years has demonstrated that an enlightened government and a dedicated, practical scientific community can succeed in rising to this crucial challenge without perpetuating its ills.

The association actively seeks the interest and understanding of the public, the support of experienced civil authority, and the reunification of the profession to make narcotic addiction a forgotten relic of a tragic past. ★★★

107 East Peace St.

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PRIVATE INITIATIVE

The young, hardworking psychiatrist, the junior in a three member group, bought out his partners. Reason: He wanted to own his mind business.

Narcotic Drug Addiction: Some Legal Aspects

CARL DEBAGGIO, LL.D.
Washington, D. C.

A SERIES OF QUESTIONS may get our discussion under way. May a physician lawfully give narcotic drugs to an addict? Is the law today different from what it was before the Harrison Act of 1914? Does the Federal Government view narcotic drug addiction as a crime? Is it necessary or would it be desirable to modify the existing Federal narcotic law?

THE PHYSICIAN'S RIGHT

Beginning with the first—a physician may prescribe, administer, and dispense narcotic drugs to an addict, providing certain conditions have been met. Prior to Dec. 17, 1914, there were no Federal laws regulating or controlling the distribution of narcotic drugs. It was just as easy to buy morphine as it is today to buy aspirin. But, on that date the Harrison Antinarcotic Act became effective. It was and is still this country's basic law for controlling and restricting the sale and distribution of narcotic drugs. The Act is a tax measure—a means of giving it constitutionality. One main purpose of the Act was to implement, at least in part, obligations undertaken pursuant to the International Opium Convention of 1912. Section 2 of the Act, now section 4705 of the Internal Revenue Code of 1954, makes it unlawful for any person to sell, barter, exchange, or give away narcotic drugs except in pursuance of an official written order of the person to receive the drug, but an exception permits the dispensing or distribution of narcotic drugs to a patient by a registered practitioner in the course of his professional practice only.

Chief Counsel, United States Bureau of Narcotics, U. S. Treasury Department.

Read before the Symposium on Narcotic Addiction, Section on General Practice, 96th Annual Session, Mississippi State Medical Association, Jackson, May 14, 1964.

We can see at a glance that the law today is much different from the law just prior to Dec. 17, 1914. What does the law really say? It says: a physician who is registered under the law and who has paid the occupational tax of $1.00 may dispense or distribute narcotic drugs to a patient in the course of his professional practice only. Another exception permits a pharmacist duly registered under the law to fill a prescription for narcotic drugs issued by a duly registered practitioner. Now I am sure you are all well acquainted with certain record keeping requirements which may seem burdensome but which are necessary in order to make this control law really work.

Representing the United States Bureau of Narcotics, the author covers four questions in his discussion: (1) May a physician lawfully give narcotic drugs to an addict? (2) Is the law today different from what it was before the Harrison Act of 1914? (3) Does the Federal Government view narcotic drug addiction as a crime? (4) Is it necessary or would it be desirable to modify the existing Federal narcotic law? In conclusion, the author says there is ". . . a need for caution when referring to addicts as the 'poor sick addict.' This is akin to the philosophy of those who would pin a 'sick label' on anyone who engages in anti-social behavior."

You will observe, however, that there are some key words in this law. For instance, the right of a physician to prescribe, dispense, and administer narcotic drugs is an exception to the general requirement that order forms be utilized. Also, the

physician is restricted to the distribution of narcotic drugs in the course of his professional practice only. You will note that the law says nothing about addicts or the right of practitioners to furnish narcotics to addicts. Aside from being registered and having paid the annual occupational tax, the practitioner is limited to distributing narcotic drugs in the course of his professional practice only.

PROFESSIONAL PRACTICE

What is professional practice as it relates to the distribution of narcotic drugs? Who has made the determination? The answer to the second question is the medical profession and the courts. The "what" question we will now discuss. The Federal courts, on a number of occasions, have found it necessary to pass judgment on what is "professional practice." In a leading case decided March 3, 1919, the Supreme Court enunciated an important principle in connection with the meaning of these words as used in the Harrison Act. The case is *Webb and Goldbaum v. U. S., 249 U. S. 96.* Webb was a practicing physician and Goldbaum was a retail druggist in Memphis. It was Webb's regular custom and practice to prescribe morphine for habitual users upon their application therefor. He furnished these prescriptions not after consideration of the applicant's individual case and in such quantities and with such direction as, in his judgment, would tend to cure the habit, or as might be necessary or helpful in an attempt to break the habit, but with such consideration and in such quantities as the applicant desired for the sake of continuing his accustomed use. Goldbaum was familiar with such practice and habitually filled such prescriptions. Within a period of 11 months Goldbaum purchased from wholesalers in Memphis 30 times as much morphine as was bought by the average retail druggist doing a larger general business, and he sold narcotic drugs in 6,500 instances. It was also shown that during the same period Webb had issued and Goldbaum had filled over 4,000 such narcotic prescriptions, and that a certain user of the drugs had applied to Webb for morphine and was given at one time 10 so-called prescriptions for one gram each, which prescriptions were filled at one time by Goldbaum although each was made out in a separate fictitious name. The following question was propounded to the Supreme Court:

"If a practicing and registered physician issued an order for morphine to an habitual user thereof, the order not being issued by him in the course of professional treatment in the attempted cure of the habit, but being issued for the purpose of providing the user with morphine sufficient to keep him comfortable by maintaining his customary use, is such an order a physician's prescription under exception (b) of section 2 (of the Harrison Act)?"

The Supreme Court answered this question in these words: "To call such an order for the use of morphine a physician's prescription would be so plain a perversion of meaning that no discussion of the subject is required. That question should be answered in the negative."

SUPREME COURT RULINGS

A year later the Court emphasized this rule in a case involving the prescribing of narcotics by a practitioner for an addict, by holding in part as follows:

"Manifestly the phrases 'to a patient' and 'in the course of his professional practice only' are intended to confine the immunity of a registered physician, in dispensing the narcotic drugs mentioned in the Act, strictly within the appropriate bounds of a physician's professional practice, and not to extend it to include a sale to a dealer or a distribution intended to cater to the appetite or satisfy the craving of one addicted to the use of the drug. A 'prescription' issued for either of the latter purposes protects neither the physician who issues it nor the dealer who knowingly accepts and fills it." *Jin Fuey v. U. S., 254 U. S. 189.*

In 1922, the Court was faced with the Dr. Morris Behrman case, *258 U. S. 280.* Dr. Behrman was charged with unlawfully selling to an addict by means of three so-called prescriptions, 150 grains of heroin, 360 grains of morphine, and 210 grains of cocaine, with intent that the addict would use the same by self-administration in divided doses over a period of several days. In holding that the doctor had violated the law, the Court stated in substance as follows:

The purpose of the antinarcotic act is to confine the distribution of such drugs to the regular and lawful course of professional practice, and not every order therefor written by a duly registered physician in the form of a prescription is necessarily a prescription within the exception.

I think from these early Supreme Court decisions it is fair to say that doctors do not have a blank check to write for narcotic drugs for an addict. It seems quite clear that the courts have not considered the furnishing of narcotics to an addict merely to satisfy his craving as being in

the course of professional practice. On the other hand, I think it is equally clear that doctors may furnish narcotic drugs to an addict in the course of trying to cure the addict of his addiction. But the furnishing of narcotics to satisfy a craving is not a bona fide effort to cure addiction. Certainly, there is no doubt that a physician may prescribe or dispense narcotic drugs to a patient suffering from diseases known to be incurable, such as cancer or advanced tuberculosis. Nor is there any question about the right of a physician to furnish narcotics in the treatment of many other ailments.

POINT OF CONTENTION

The main point of contention, as voiced by some medical practitioners, seems to form around the matter of furnishing narcotics to addicts, in a defeatist attitude that we can't cure them so let us give them narcotics so they won't have to get them from the illicit trafficker. Not only have the courts found that prescribing or dispensing narcotics merely for the gratification of addiction is not professional practice, but the most recent statement of the American Medical Association issued jointly with the National Research Council states that "The maintenance of stable dosage levels is generally inadequate and medically unsound." This is no more nor less than a reiteration of the position of the American Medical Association regarding addiction first taken 40 years ago. In simple language, I think, the medical profession is dedicated to seeking to cure a person of an ailment; and not submission to a regimen which would perpetuate the ailment.

THE LINDER DECISION

There have been some lawyers and some physicians who contend that a 1925 Supreme Court decision *(C. O. Linder v. U. S., 268 U. S. 5)* changed the ruling of the Court in the Dr. *Behrman* case. They contend that the Bureau of Narcotics refuses to properly interpret the *Linder* decision and that if we would but do so, then a doctor could furnish narcotics to an addict merely to satisfy his craving, there would need be no fear of prosecution by the Bureau of Narcotics (actually the Bureau does not prosecute—the Department of Justice does that), and the illicit traffic would end over night.

The facts in the Linder case were that the physician had given one table of morphine and three tablets of cocaine to an addict. The indictment had not alleged that Dr. Linder did this not to a patient and not in the course of professional practice only. Noting this absence in the indictment the Court held that it could not supply the omission by holding as a matter of law that the sale of four tablets of narcotics necessarily transcended the limit of professional practice. In at least 10 cases, decided by five different United States Courts of Appeal throughout the years *since Linder,* the Courts have affirmed judgments of convictions for making unlawful sales of narcotics by physicians where the indictments, unlike that used in *Linder,* duly negated "good faith" and "in the course of professional practice." If five United States Courts of Appeal in 10 cases decided subsequently to the *Linder* decision, have upheld the principle of the Jin Fuey Moy case condemning prescribing or dispensing of narcotics merely for gratification of addiction, it is reasonable to assume that that principle has *not* been overruled by the *Linder* decision. Surely, if these intermediate apellate courts, the Bureau of Narcotics, and the American Medical Association were misinterpreting the effect of the *Linder* decision, one of these later decisions of the Courts of Appeal would have reached the Supreme Court for a corrective pronouncement.

A CRIME OR A DISEASE?

If a physician may not, under the ethics of bona fide medical practice and the interpretation of the law by the courts, furnish narcotics to addicts merely to satisfy their cravings, then is drug addiction a crime or a disease?

We so often read articles in the newspaper, magazines, and Sunday supplements; we view television programs, we read books and the question is posed: Drug addiction—a crime or disease? The impression is given and some argue that it is a simple dichotomy. It is one or the other. It is not that simple. Although we can quite simply state that under Federal law it has never been a crime to be a drug addict, addiction as such is not a crime. The Supreme Court in the recent case of *Robinson v. U. S., 82 S. Ct. 1417,* struck down a California statute which provided a penalty for being an addict. Since then some other State laws making similar provisions have been over-turned. So it seems to me those who raise the question might well limit themselves to this: "Is drug addiction a disease?" Others may ask, "Is drug addiction morally wrong?" Still others may raise the issue of whether drug addiction really is a social vice that should be frowned upon.

I have some strong personal views as to the moral and social desirability of drug addiction. I believe that drug addiction, that is, the abusive use of narcotics (or other drugs for that matter), the use of narcotics for the gratification of the appetite, the nonmedical addiction, is morally wrong and should be unacceptable to society.

There is no unanimity among doctors as to whether narcotic addiction is a disease. But I am convinced that the better reasoned medical opinion is that drug addiction is a symptom of some personality disorder or mental defect. I am reminded of a recent article in the *American Bar Journal*[1] by a psychologist, George Lassen. He quotes from Dr. Szasz' book,[2] "The Myth of Mental Illness" wherein our present day misuse of the concept of mental illness is discussed. Dr. Szasz states:

"The adjectives 'mental,' 'emotional' and 'neurotic' are simply devices to codify, and at the same time obscure, the difference between two classes of disabilities or 'problems' in meeting life. One category consists of bodily diseases, say leprosy, tuberculosis or cancer, which, by rendering imperfect the functioning of the human body as a machine, produce difficulties in social adaptation. In contrast to the first, the second category is characterized by difficulties in social adaptation not attributable to malfunctioning machinery but 'caused' rather by the purposes the machine was made to serve by those who built it (e.g., parents, society), or by those who use it, i.e., individuals. With increasing zeal, physicians and especially psychiatrists call 'illness' (that is, of course, 'mental illness') anything and everything in which they could detect any sign of malfunctioning, based on no matter what norm. Hence, agoraphobia is illness because one should not be afraid of open spaces. Homosexuality is illness because heterosexuality is the social norm. Divorce is illness because it signals failure of marriage. Crime, art, undesired political leaderships, participation in social affairs, or withdrawal from such participation —all these and many more have been said to be signs of mental illness."

A VOLUNTARY ACT

Certainly, in the vast majority of cases, drug addiction is acquired by the voluntary act of a person taking a narcotic drug. One may "catch" a cold or develop a mental illness or suffer leprosy or scarlet fever without deliberately and voluntarily becoming exposed. The drug addicts with which we are concerned brought about their condition by their own voluntary act. On the voluntary nature of the beginning use of narcotics, Dr. James V. Lowry, retired assistant surgeon general of the United States says: "What started as a voluntary experiment in pleasure, or relief from unpleasantness, becomes a compulsive drive to maintain what the addict considers his 'normal' condition of euphoria."

THE PERSONALITY FACTOR

The Ad Hoc Panel which made a report on a study of drug addiction just prior to the White House Conference on Narcotic and Drug Abuse states this: "Drug abuse is not a disease, per se, but seems in significant degree to be a manifestation of an inadequate personality unable to cope with the stresses of normal life." At another place in the report the Panel said this: "For the majority of drug abuses, however, prevailing philosophy in the United States is based on the premise that it is better to attempt termination of the drug habit and to create conditions wherein the former addict can function in society without resorting to drugs. The Panel has seen enough successes of this approach to lead it to the view that it is worthy of extensive further trial."

You will be interested to know that a recent study conducted by the Federal Bureau of Investigation confirms findings by others that 75 per cent of addicts arrested for narcotic offenses had been arrested for a nonnarcotic offense prior to the first narcotic offense. Identical information was learned in a study made by the same agency in 1934.

NEED FOR CAUTION

All of this it seems to me points to a need for caution when referring to addicts as the "poor sick addict." This is akin to the philosophy of those who would pin a "sick label" on anyone who engages in anti-social behavior. And to assure of the good company I keep, I would like to conclude with a quotation from the July 1963 issue of *GP* published by the American Academy of General Practice.

WHO'S 'SICK'

"Society has many ways of digesting the socially unpalatable. We say, for example, that the alcoholic is *sick*, the dope addict is *sick*, the juvenile delinquent is *sick*, the prostitute is *sick*, ad infinitum. This convenient device perhaps helps us ignore reality and remove ourselves from the vicinity of an ugly social hook.

"We question the wisdom of employing any catch-all device, especially one used to ease our own social conscience. How far do we extend this convenient device, how many millions of people do we ultimately include? Is the child who covers a wall with lipstick

illustrations 'sick'? Is the lady who drives 40 m.p.h. in a 35-mile zone 'sick'? The child has shown a maliciously destructive attitude toward property of value, the lady has shown an apparent disregard for community law. Are they 'sick'—or simply human and, as such, imperfect? Are they intellectually indigent, biosocially inferior—or simply healthy individuals who sometimes stray from the narrow pathways of "acceptable behavior'?

"Who gets the blame if the 'cure' fails entirely or is of short duration? Answer: The physician—who else?

"For the moment, however, we're not immediately concerned with failures to 'cure.' We're more immediately concerned with the tendency to tie a 'sick' label on any person who shatters the barrier of social propriety, the person who for an instant or a seeming eternity departs from a somewhat fuzzy 'norm.' "

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BREATH OF LIFE

A local dowager had just completed the Emergency Self-Help Training Program sponsored by the local medical society's disaster care committee. As she crossed the street one day, she spotted a man lying face down in a flooded gutter. Rushing quickly to his succor with her freshly acquired skills, she rolled him over and began mouth-to-mouth resuscitation.

Reacting suddenly, the man pulled away and sat up abruptly: "Lady, I don't know what you're trying to do, but I'm supposed to be cleaning this storm drain!"

The Institutional Treatment of the Narcotic Addict

ROBERT W. RASOR, M.D.
Lexington, Kentucky

DRUG ADDICTION is the state of periodic or chronic intoxication, detrimental to the individual and to society, produced by the repeated consumption of a drug (natural or synthetic). Its characteristics include: (1) an overpowering desire or need (compulsion) to continue taking the drug and to obtain it by any means, (2) a tendency to increase the dose, (3) a psychic (psychological and sometimes physical) dependency on the effect of the drug."[1]

This definition of drug addiction was agreed on in 1950 by the Expert Committee on Drugs Liable to Produce Addiction, now a subdivision of the World Health Organization. They labored for 20 years before there was agreement on this definition and this is an indication of the complexity of the problem with which we are dealing.

PERTINENT DEFINITIONS

In considering the subject of narcotic addiction it is well to also define several phenomena that are closely related to addiction and very much a part of it. "Tolerance is defined as a diminishing effect of repetition of the same dose of the drug, or conversely, a necessity to increase the dose to obtain an effect equivalent to the original dose when the drug is administered repeatedly over a period of time. Physical dependence refers to an altered physiological state, brought about by the repeated administration of the drug over a long period of time which necessitates the continued use of the drug to prevent the characteristic illness which is termed abstinence syndrome."[2] What this means is that when the drug is taken regularly over a period of time the body becomes dependent on the drug and if, for one reason or another, the drug is no longer available then this characteristic group of symptoms develops. This is the characteristic clinical picture presented by patients who are suddenly withdrawn from their narcotics. Not all addicting drugs produce physical dependence or demonstrate the abstinence syndrome. In cocaine or marihuana addiction physical dependence does not develop and in their abrupt withdrawal the abstinence syndrome is not produced.

The United States Public Health Service operates two specialized hospitals for the care of drug addicts. The first is in Lexington, Ky., and opened in 1935, the second, is in Fort Worth, Texas, and opened three years later. The author discusses admission procedure for these institutions and the schedule of treatment for patients.

U. S. HOSPITALS

In the definition of drug addiction it is stated that an overpowering desire or need develops (compulsion) and the individual continues to take the drug until he suffers or society suffers. The individual is no longer able to control this compulsive need and when we recognize this loss of control it can be said that addiction is present. When the individual is no longer able to exert power of control over his use of the addicting drug, it is necessary that someone else exert such control until it is felt that the individual is once again able to assume this power himself. In the institutional treatment of the narcotic addict the institution must provide controls for the patient.

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Read before the Symposium on Narcotic Addiction, Section on General Practice, 96th Annual Session, Mississippi State Medical Association, Jackson, May 14, 1964.

The institution that I am speaking of is a specialized hospital. The United States Public Health Service operates two such hospitals; one in Lexington, Ky., opened in 1935, the second, the United States Public Health Service Hospital in Fort Worth, Texas, opened three years later. These specialized hospitals are much the same as many large psychiatric hospitals. There are many prisoner patients at both hospitals and a majority of the addict patients are sent to the hospital for their drug addiction by Federal Courts. Voluntary patients also are admitted to both hospitals. The Lexington hospital admits voluntary male patients from east of the Mississippi River and women patients from anywhere in the United States. The Fort Worth hospital does not admit any women patients. Male patients from the area west of the Mississippi are admitted to the Fort Worth Hospital. Over 3,000 such patients are admitted to both hospitals every year. The ratio of men to women is roughly 4 or 5 to 1. About 50 per cent of the patients admitted to the hospitals are between the ages of 21 to 30. About 40 per cent of the patients are Negro and about 55 per cent are white. The racial distribution of the patients has changed a great deal in the past 20 years. In 1940, 83 per cent of the admissions to the Lexington hospital were white and 14.3 per cent were colored.

For a patient to be eligible for voluntary admission to either of the two hospitals he must be addicted to "habit forming narcotic drugs" as defined by law. The drugs included are all of the opiates, cocaine, the synthetic analgesics, such as Demerol and methadone, and marihuana. Patients cannot be admitted if they are taking sedatives, such as barbiturates or any of the tranquilizers, unless they are also taking one of the narcotic drugs.

TREATMENT PHASES

Treatment starts as soon as the patient arrives at the hospital. It can be separated into several phases: (1) Withdrawal, (2) Convalescence, (3) Rehabilitation with treatment for psychic dependence, (4) Post-hospital treatment and follow-up. A complete history of the patient's use of drugs is taken. This includes all the facts surrounding the onset of addiction, the duration of addiction, the type, amount, and method used for taking all the drugs that the patient has used. It also includes any untoward effects that any of the drugs have produced. The history must, of necessity, determine all the facts regarding the quantity and method of use of all addicting drugs. It is well to remember that it is difficult to get a precise history from each and every patient but, nonetheless, such an attempt must be made to obtain all the information possible. In addition to the drug history, a thorough medical history is recorded as on any medical patient in a general hospital. Following the history taking, a complete physical examination is performed and recorded. This gives an accurate indication of the physical state of the patient at the time of his admission.

WITHDRAWAL

Following the history and physical examination, the patient is taken to the Withdrawal Unit where he is observed for any of the characteristic symptoms of the abstinence syndrome. These signs include sweating, lacrimation, rhinorrhea, yawning, dilation of the pupils, goose flesh, muscular jerking and cramps, anorexia, vomiting, diarrhea, insomnia, and increase in blood pressure and temperature. These symptoms may be rated by a system devised by Kolb and Himmelsbach.[3] When symptoms of abstinence develop, methadone is administered orally in quantities just sufficient to keep signs of abstinence at a tolerable level, and then the dosage is progressively reduced.

The withdrawal treatment has been described in a number of publications by Isbell,[4] Wikler[5] and Fraser,[6] former staff members of the Addiction Research Center of the National Institute of Mental Health which is located at the Lexington Hospital. Anyone treating the narcotic addict should become familiar with their work. During this withdrawal procedure, which usually lasts for a period of from four to seven days, depending upon the extent and duration of the addiction, the patients are somewhat uncomfortable but do not experience or display the usual agonies so often associated with withdrawal and described by the patients as "kicking the habit cold turkey."

If the narcotic addiction is associated with barbiturate addiction, then the withdrawal period will be prolonged and the patient must be stabilized on barbiturates as well as on methadone with the gradual withdrawal of both medications. Hamburger[7] has shown that "more than 31 per cent of heroin addicts admitted to the hospital in 1962 and 1963 claim to have taken doses large enough to addict and 21 per cent of the heroin addicts were found to have been physically dependent to barbiturate drugs on admission." It is well to remember that about 75 per cent of the patients admitted to the Lexington Hospital are addicted to heroin. It is of the utmost importance that the pos-

sibility of barbiturate addiction associated with narcotic addiction be recognized and properly treated. This has been pointed out by Isbell.[8] Any person caring for addicts should be aware of the dangers involved in withdrawal of barbiturate drugs. If the individual is addicted to barbiturates and abrupt withdrawal is undertaken, a toxic psychosis may be precipitated which may go on to delirium, coma, and even death, if not recognized and properly treated.

CONVALESCENCE

Following the withdrawal procedure a convalescent period begins. The patient starts to regain his appetite, and his weight, and strength increases. He continues to display irritability, restlessness, and has difficulty getting his proper rest. These physical symptoms may last for several weeks. The patient remains in a convalescent unit until his physical and mental status has improved sufficiently to the point where he can be transferred to the Orientation Unit. In the Orientation Unit the patient is interviewed by various staff members representing psychiatry, educational, vocational training, occupational training, social service, psychology, religious counseling, and recreational programs. Following the evaluation that takes place in the Orientation Unit a treatment program is formulated by the staff for each patient.

REHABILITATION

From the moment of admission until discharge one aspect of the program is the same for all patients, i.e., living in a drug-free environment. The patient must once again learn to live a life without having to resort to the use of drugs. Those who display a desire and willingness to accept psychotherapy are assigned to staff psychiatrists for group psychotherapy. A limited number are assigned for individual psychotherapy.

The Psychology Service administers a battery of psychology tests to the patients to determine the patients most likely to benefit from psychotherapy. In special diagnostic problems they administer special tests helpful in establishing the diagnosis. They also, participate in individual and group therapy and are important members of the treatment team.

The Social Workers function in their liaison capacity with the patient's family and community and assist in post-discharge planning and follow-up. Attention is given to the family situation from which the patient came as there is general recognition that when addiction develops in one member of the family, the entire family constellation has to be considered in the overall treatment program if any lasting results are to be achieved.

All patients who are physically able are given a vocational assignment where an effort is made to help them learn good work habits and to work and live with others. The vocational staff members keep in close contact with the patients' physicians and discuss any problems or unusual behavioral patterns of the patients. Staff psychiatrists join in a discussion in a consulting role when patients are given vocational assignments. The vocational and educational staff assist in preparing training programs in various units throughout the hospital. Monthly reports are made on the patient's progress and indicate the degree of adaptation the patient has displayed. Any abrupt deviation from usual behavior during working hours is discussed with the patient's psychiatrist. Another activity important to the patient and his morale is the recreational program. The program not only offers the patient entertainment but an opportunity to become interested in sports and participate as a team member or simply to learn to play "by the rules."

The religious and spiritual activities of the hospital are another important part of the total treatment program. Regular Catholic, Jewish, and Protestant services are conducted for patients who attend on a voluntary basis. Counseling service is also provided by the chaplains of these three faiths. Additional religious counseling is provided for patients by graduate students participating in an approved training program in pastoral counseling conducted jointly by the hospital and a local theological seminary.

The patients themselves also conduct an Addicts Anonymous program similar to the Alcoholic Anonymous program. This program has been in operation for almost 15 years and has been proven quite effective with many patients. This group receives the support of the hospital staff, but the program is entirely their own.

FOLLOW-UP

The staff at the hospital feels that for a voluntary patient to have a reasonable chance for staying off of drugs after he leaves the hospital he should remain in this drug-free environment for a period of many months, usually about four to six months. This would mean that after the volunteer patient remains in this atmosphere for this period of time

the physical effects of addiction would have been eliminated, and the patient should be in a psychological state where he should once again be able to exert a sufficient amount of control over himself so he would not need to resort to the use of narcotics or any other addicting drug. Most of the patients, when they leave the hospital, need a great deal of help if they are going to be able to become useful citizens and resume responsibility for themselves and others. When they return to their community they will need help in obtaining employment and support in meeting some of the difficult problems in living that they are sure to encounter. Regardless of how hard the patient has worked in the hospital, the real proving ground will be in his community when he returns. A helping hand from the family physician, the employment agency, a probation officer, a minister, or social worker may go a long way in determining if the patient once again becomes re-addicted or whether he becomes a useful and productive citizen. ★★★

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TERMINAL TYRANNY

The meanest man in town was bitten by a rabid dog. Failing to respond to the Pasteur treatment, he was advised by his family physician to draft his last will and testament. As the doctor made a heroic last effort to save the patient, the man wrote furiously, using six pages of stationery.

"Isn't that a rather long will?" the physician asked.

"Will, nothing," responded the ill-disposed patient. "I'm making a list of people I intend to bite!"

The Treatment of Narcotism in Mississippi

W. L. JAQUITH, M.D.
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THE CITIZENS of our state can be justly proud of the pioneer work done in this community in the treatment of narcotism. Many of our sister states have only recently recognized this problem and have not afforded any type of treatment facilities for those suffering from addictive disorders. The citizens and the medical profession of Mississippi have long been interested in their fellow man and have over the years provided within their means, and at times beyond their means, adequate medical care for those who suffer from physical as well as emotional disorders.

EARLY CARE

On Jan. 8, 1855, the Mississippi State Hospital opened its doors for the care and treatment of the mentally ill. The old hospital was located on the present site of the University of Mississippi School of Medicine. Here on Jan. 8, 1855, some 109 years ago, a white female with her slave in attendance was the first patient admitted to a public Mississippi mental hospital.

The Mississippi State Hospital has intact its admission records dating back to 1855. These records reveal that the first addictive disorder admitted to this public mental hospital was on June 28, 1872, when a white male suffering from alcoholism was brought to the institution for treatment.

These historical records further reveal that the first person suffering from narcotism was a white male admitted on Oct. 28, 1884. He was followed in January 1888 by another white male addicted to morphine. Since that time and for more than 80 years narcotism has been recognized as a medical problem and treatment facilities have been afforded people suffering from this disorder. In 1890, the East Mississippi State Hospital at Meridian was opened. This institution, in its 74 years of operation, has also welcomed and given treatment to those suffering from addictive disorders.

Narcotism is not a new problem in Mississippi. Historical records show that the first person suffering from narcotic addiction was admitted to a state mental hospital on Oct. 28, 1884. In the more than 80 years since then, narcotism has been recognized by the people of Mississippi as a medical problem and treatment facilities have been developed for these patients. The author reviews the records of the Mississippi State Hospital and discusses state law regarding drug addiction. In closing, he considers the treatment regime for patients admitted to the Mississippi State Hospital.

We are well aware and proud of the history of Mississippi medicine. We know of the glorious pages written in the field of public health by the late and beloved Dr. Felix J. Underwood. We are well aware of the pioneer work done in tuberculosis by another distinguished colleague, Dr. Henry Boswell. It appears from our historical pages that we in Mississippi have also pioneered in the treatment of narcotism and have written another page of medical history in which our people and our profession can be justly proud.

I have taken the liberty to study our records for a period of time extending from July 1, 1958 through June 30, 1963 with reference to the number of patients admitted to the Mississippi State Hospital for the treatment of drug addiction. I have not broken these down into those simply suffering from narcotism but have lumped them

Director, Mississippi State Hospital.
Read before the Symposium on Narcotic Addiction, Section on General Practice, 96th Annual Session, Mississippi State Medical Association, Jackson, May 14, 1964.

all together to give you some idea as to the scope of the drug addicts the Mississippi State Hospital at Whitfield treats.

FIVE YEAR RECORDS

Our records reveal that in the five-year period mentioned above, there were 271 first admissions to Mississippi State Hospital for drug addiction. There were 148 males admitted and 123 females. It has been my experience over the years to notice how fast the gap has closed in the number of admissions of male versus female. For many years the males far out-ranked the females in alcoholism. This still holds true. In the field of addiction, as previously stated, the male and female ratio is fast becoming an even one.

Our five-year record for readmissions shows that 258 males were readmitted to the hospital for drug addiction. One hundred and fifty-seven females were readmitted for a total of 415. The first admissions and readmissions give us a grand five-year total of 686 persons suffering from some type of drug addiction.

It is interesting to further note that of the readmissions, 67 white males have had seven or more admissions to the institution in five years for this disorder, and 49 females have been admitted seven or more times for treatment of addiction.

These figures show that during the past five years approximately five per cent of our total admissions have been in the area of drug addiction. The hospital also treated within the five-year period some 4,000 alcoholics who were admitted for the first time or who were readmitted for treatment as alcoholics. The alcoholics average out to approximately 10 per cent of total admissions.

ADMISSION PROCEDURE

Many physicians are unaware of the procedure needed for the admission of an addict to the Mississippi State Hospital at Whitfield or to the East Mississippi State Hospital at Meridian. As a general rule, physicians need not be concerned with the admission procedure since this is well covered in the Mississippi statute and grants the power of admission to the chancery judge or the chancellor in a particular district. Again waxing historical, we can find that in 1930 the first law allowing the chancery judge to admit people to Whitfield and to Meridian was enacted. This law gave the judge power to either send these people on a voluntary basis or to have them brought before the court and there sent against their wishes if the judge felt in his opinion such was necessary.

The law for the admission of narcotics and alcoholics to the Mississippi State Hospital and to the East Mississippi State Hospital was completely revamped and rewritten in 1950. Again, this can be a voluntary or an involuntary admission. Alcoholics and narcotics are admitted to the mental hospital on an order from the local chancellor or chancery judge. The addict appears before this judge on his own volition and requests admission to the hospital for treatment of drug addiction. The addict signs a simple paper wherein he waives process under law and requests treatment. After this the chancery judge gives him an order admitting him to the mental hospital for treatment of his addiction. This is more or less voluntary admission.

If the addict is hostile and refuses treatment. any member of his family, a friend, or some disinterested party can sign a complaint against him stating that his addiction makes him a menace to himself and to others. In this complaint they set forth that he is addicted to drugs and is in need of hospitalization and treatment. After this complaint is signed, the addict is taken into custody by local law enforcement officers. The addict then has five days to answer the complaint against him. If he so desires, he is entitled to a trial by jury before the chancery judge. There the judge, with or without the jury, hears the complaint against him. If the judge feels that his addiction has reached such proportions that he needs hospitalization and treatment, the judge then orders him to the hospital for treatment.

The law allows all addicts three admissions to the hospital free of charge. On the fourth and all subsequent admissions the law further states that the alcoholic or addict cannot be admitted until he has paid $50.00 for admission to the institution. The admission law for addicts states that the patient be admitted for a period of not less than 30 nor more than 90 days and this is further qualified that any state hospital has the authority to release the patient at any time during treatment notwithstanding the order of his commitment and admission. The final discharge or release of patients is left entirely up to the hospital staff. All civil rights of the addicted person are protected as the admission law states that this patient loses no right or privileges as a citizen of the United States or of the state of Mississippi for being so admitted as an addicted person.

Many doctors within the state erroneously send addicted persons to us on the signature of two physicians. Under the two physician admission law to mental hospitals in this state, the hospital must make a psychiatric determination as soon as possible. If a person is not insane, the law specifically spells out that he cannot be retained in a mental institution. Since the vast majority of addicts are not mentally ill or psychotic, we are not allowed to legally hold them. Under the chancery order we can hold them but not on the signature of two physicians if they suffer from no psychosis and are not mentally ill.

TREATMENT REGIME

After those persons addicted are admitted to the hospital, what is the treatment regime? In many instances our first concern is for their physical welfare. Each addict is given a complete physical examination with x-rays and necessary laboratory tests. The hospital has a large consulting staff of Jackson specialists who are available for medical care in any known specialty. Many of the addicts with physical disabilities are given the necessary physical treatment.

Following a close evaluation of the physical condition of the addict, the withdrawal regime is begun depending on the type of drug or drugs to which the patient is addicted. Also taken into consideration is the amount of drug or drugs used daily. It was my honor and privilege for more than ten years to serve as the physician in charge of the alcoholic and narcotic section of the Mississippi State Hospital. Here I developed a speaking acquaintance with more than 10,000 alcoholics within this state and some 1,500 persons addicted to drugs.

One of the most humane things to come along in medicine in my opinion was the advent of methadone or Dolophine withdrawal of the addict. Prior to this I had suffered through the withdrawal of many an addict on the old Hyoscine and Scopolamine withdrawal. This was a terrifying and barbaric experience. One of the finest advances irregardless of plastic aortas and human transplants in medicine, in my opinion, was the more humane methods for the withdrawal of those suffering from narcotism following the public health work in Lexington with methadone or Dolophine.

Each addict is evaluated as to his drug intake and the severity of his addiction. He is placed on parental or oral Dolophine withdrawal. This withdrawal usually takes from 10 to 20 days. We usually have a good schedule worked out for these people and try to be humane as possible with our withdrawal. Rather than go into detail, we will be happy to furnish any physician with the withdrawal schedule used in our facility.

In discussing the treatment we must be governed by three basic facts. I believe first the addict must be treated in a rigidly controlled environment such as in an institution. I secondly believe that withdrawal is not synonymous with treatment but is only the first easy and the most humane step. I believe thirdly that psychotherapy offers the only hope of relief for those suffering from narotism. It must be carried out for months or years if good results are to be obtained. I readily admit that this is rarely possible.

The physician should not attempt to treat these people as an out-patient case or as in-patients in a general hospital. When the patient begins treatment, he should adopt a reassuring attitude, and he must be uncompromising once the schedule of withdrawal has started.

It is of great importance to get a detailed history from the patient with reference to the drugs that he is using and is addicted to. Many have combined addictions with narcotics and barbiturates playing the major role. If a barbiturate addict is not withdrawn properly, severe epileptic-like convulsions can occur which may cause death or injury. Those who use large doses of Demerol can also be subjected to severe epileptic form type of convulsions. You are well aware of the convulsions caused following the withdrawal of meprobamate and Librium which are two recent tranquilizers and have high addictive qualities.

The prognosis and treatment depends on several factors. The prognosis depends usually on the personality defect underlying the addiction and, therefore, must always be guarded. In my opinion it becomes worse with the duration of the addiction and the type of drug used. I can only say that if a person has been addicted for more than two years, a grave prognosis faces the physician.

CONCLUSION

In conclusion, let me say that narcotism is not a new problem to the people of Mississippi. Our citizens and our physicians have long recognized this problem and have offered treatment facilities for those who seek help. Our hospital records reveal that for more than 80 years addictive disorders of all types have found a haven of hope and therapy within our state. ★★★

Mississippi State Hospital

Radiologic Seminar XXXIII: Regional Enteritis

W. L. RONE, M.D.
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ORIGINALLY, REGIONAL enteritis was described as a necrotizing and cicatrizing inflammatory process confined to the terminal ileum. The prominent clinical features were diarrhea, lower abdominal pain, fever, loss of weight, and anemia. It is now apparent that this same disease process can involve any part of the small intestine, as well as the colon, although approximately one half of the reported cases involve the terminal ileum.

The incidence is reportedly greater among Jews and of notably low frequency among Negroes, according to Bockus. It is more common in young people with an average at the onset of symptoms of 27 years.

The enteritis is manifested grossly as a thickening of the bowel wall, narrowing of the lumen of the intestine, and mucosal ulceration and destruction. Microscopically one sees non-caseating tubercle-like nodules and a diffuse inflammatory granulomatous process involving all layers of the bowel wall and the mesentery.

The more frequent complications of regional enteritis include perianal and perirectal abscesses and fistulae, bowel perforation with subsequent fistulae, bleeding, intestinal obstruction and nutritional disorders.

Roentgen examination of a patient suspected of having regional enteritis should be initiated by means of a barium enema. This may be followed by a small bowel series to evaluate the remainder of the intestine as well as the terminal ileum. Classically, the advanced changes in the terminal ileum are seen on x-ray as a uniform pronounced narrowing, with the luminal surface of the involved area being smooth or very slightly roughened. The segment is fixed and rigid and the contour changes very little in serial roentgenograms. The radiographic appearance in this situation has been referred to as the "string sign." (Figures 1 & 2.) In the early stages of the disease the ileum is normal in caliber or possibly slightly narrowed. The mucosal folds are absent and the lumen may appear unusually smooth or



Figure 1. A barium enema film demonstrating the classical appearance of regional enteritis in the terminal ileum, with gross narrowing and some irregularity of the lumen. Thickened mesentery separates the involved segments.

Sponsored by the Mississippi Radiological Society.



Figure 2. A barium enema film on the same patient, obtained five years later, following a short circuiting procedure. Note the typical "string sign" in the involved terminal ileum, the radiographic pattern having changed very little over the five year period.



Figure 3. Surgically proven regional enteritis in the mid small bowel of a 36-year-old female whose only complaint was diarrhea. Note the narrow, somewhat irregular small bowel loop in the left mid abdomen on the one hour film from a small bowel study.

have a roughened cobblestone surface.

Generally the roentgen findings in the regional enteritis are fairly conclusive; however, there are several diseases which may occasionally simulate enteritis. These include lymphosarcoma, Hodgkin's disease, infarction of the small intestine, carcinoma, lymphoid hyperplasia, and tuberculosis. ★★★

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Clinicopathological Conference LX

Conducted by the Department of Pathology
Mississippi Baptist Hospital
Jackson, Mississippi

A 40-YEAR-OLD WHITE WOMAN was admitted to the Baptist Hospital on July 11, 1964, for removal of a small tumor mass in her right neck. The mass had been present for an undetermined period of time but recently had become moderately tender. Clinically, it was thought that this mass represented a degenerating lipoma. Histological examination of the removed mass showed an epidermal inclusion cyst with fibrosis of the surrounding subcutaneous tissue.

The patient had previously been admitted on Dec. 11, 1962, because of abdominal pain and watery diarrhea. During the previous four months the patient had had abdominal pain, griping and colicky in character, with watery diarrhea and as many as 5 to 10 stools daily. The stools, at times, were blood-tinged and contained mucus. The patient denied colds, sore throats, cough, chest pain, hematemesis, or hematuria. She had had moderate weight loss (about five pounds) and sometimes nausea with occasional vomiting. She had an appendectomy and a hysterectomy in 1949 and cholecystectomy for stones in 1961.

On admission the blood pressure was 110/70, the pulse 80, the respiration 16, and the temperature 99 degrees. Physical examination revealed an obese, well-developed, white woman lying quietly in bed. The heart and lungs were normal. The abdomen was soft and no masses or organs were palpable. The bowel sounds were hyperactive, and there was tenderness in the epigastric area and over the colon.

The hemoglobin was 11.5 per cent and the hematocrit 35 vol. per cent; the WBC was 14,000 with 5 per cent monocytes, 25 per cent lymphocytes, 3 per cent eosinophils, 57 per cent segmenters, 10 per cent bands, and 1 per cent metamyelocyte. The urine was normal, the serum amylase was 84 units, the glucose 84 mg. per cent, the potassium 4.8 mEq., the sodium 137 mEq., and the urea nitrogen 13 mg. per cent.

Routine upper GI series were negative. A barium enema showed a cobblestone derangement of the mucosal pattern. The left colon was large, atonic with a large mass being encountered at the mid portion of the transverse colon; only small quantities of barium were forced past this point into the right colon; an area of constriction was noted in the upper sigmoid.

The patient in CPC LX is a 40-year-old white woman admitted on July 11, 1964 for removal of a small tumor mass in her right neck. Histological examination of the removed mass showed an epidermal inclusion cyst with fibrosis of the surrounding subcutaneous tissue. On previous admissions the woman had been found to have multiple polyposis of the colon with low grade carcinomas in some of the polyps and a total colectomy and ileostomy had been done for this condition.

Discussers are Drs. Albert L. Meena, Robbert P. Henderson, Louis Schiesari, Thomas K. Williams, Jr., Eugene J. Thomas, and William V. Hare.

On Dec. 18, 1962, an abdominal operation was performed in which a large portion of intestine was removed. In the specimen submitted for examination it was noted that an area of dense fibrosis extended from the cecum to the terminal ileum for a distance of about 16 cm.; the ileum appeared quite constricted although there was no marked dilatation of the ileum itself above this area of construction. The postoperative course was complicated by a wound abscess which ruptured into the peritoneal cavity. The peritoneum was opened and drained. The patient made a quick recovery and was discharged on Jan. 12, 1963.

The patient was again admitted on March 10, 1964, because of abdominal pain. During the interval the patient had had frequent episodes of diarrhea and constipation and troubles with her urinary tract. In spite of this, however, she had gained weight and looked remarkably well. During the previous four weeks the patient had experienced progressive, severe constipation, requiring continuous medication with laxative and irrigation of ileostomy. It was stated the patient was admitted for relief of a partial obstruction if such existed.

On admission the abdomen was distended with diffuse tenderness. The peristalsis was described as rumbling. The consultant surgeon stated that there was a tender mass in the left lower quadrant, but he did not believe that the patient was obstructed. Laboratory data were within normal limits. X-ray studies revealed areas where the small bowel was slightly displaced; one of these areas was located in the left lower abdomen and one in the right mid to lower abdomen. These displacements probably reflected the presence of masses in the abdomen. There was no obstruction to the flow of dye through the small bowel.

An exploratory laparotomy was performed on March 13, 1964. A mass was found which occupied most of the mesentery of the terminal ileum and perhaps part of the jejunum. The mass in the mesentery appeared as a stony, hard, fibrotic process which extended up as high as the ligament of Treitz. There was no pus, and there were a few adhesions which were readily freed in getting into the abdomen. All the organs in the abdomen were explored and found to be within normal limits. A sample of this mass was removed for miscroscopic study.

DISCUSSION

Dr. Albert L. Meena: "This is a lady who is a fairly young woman, 40 years old, who had extensive disease of some type in a skip pattern in her large intestine. It certainly did not look like the picture of a carcinoma on the radiologist's film. There was a dilatation of the left colon, constriction in the sigmoid area, and some marked changes in the ileum and in the cecum. These x-rays showed a cobblestone appearance of the mucosal pattern and actually one portion of the transverse colon showed a large mass protruding into the lumen which could either have been an intussusception of the bowel or else some type of tumor mass on its own. This is a very unusual pattern, one would hardly suspect that this would be carcinoma involving multiple skip areas in the large bowel itself and we have to, I think, rule out carcinoma and go to some process such as a lymphoma of the large intestine or an ulcerative colitis.

"Let us take an ulcerative colitis first. This was a 40-year-old woman. She was certainly in the age group but she was obese. However, she had had a weight loss of five pounds. She had some diarrhea and some blood and some mucus in the stools. These all would certainly go along with ulcerative colitis, but it was an unusual picture. The fibrosis in the ileum and in the cecum could certainly be explained by ulcerative colitis. In particular they did a total colectomy and this would be the procedure of choice in this disease under these circumstances. However, after 15 months she still was doing well and she was still obese and this would certainly be against ulcerative colitis and in particular it would be against carcinoma occuring with ulcerative colitis.

"Dr. Henderson, will you review the films?"

REVIEW OF FILMS

Dr. Robert P. Henderson: "These barium enema films of Dec. 13, 1962, show two rather prominent lesions within the colon. There is a large fungating mass in the mid transverse colon



Figure 1

measuring about 8 cm. in diameter. Another annular infiltrating lesion is seen in the sigmoid measuring approximately 2½ cm. in length but with irregular margins. The remaining colon has a cobblestone appearance consisting of small polypoid lesions varying from about 2 to 10 cm. (Figure 1)."

Dr. Meena: "Do you think that could possibly be an intussusception in the transverse colon?"

Dr. Henderson: "No, it seems to be a large irregular mass filling the lumen."

Dr. Meena: "You think then that is a true intraluminal mass?"

Dr. Henderson: "This is a true intraluminal mass having a cauliflower appearance and appearing to arise from one wall of the colon. There is no evidence of any 'coiled spring' appearance to the mucosa to suggest an intussusception."

Dr. Meena: "I believe the next film was when she came back in 15 months later."

Dr. Henderson: "Our next study is dated March 12, 1964. These small bowel films show large masses within the mid abdomen outlined by the barium-filled loops of jejunum and ileum. These multiple masses seem to be extrinsic to the small intestine. There are two areas seen on this film which seem to be causing some narrowing of the lumen of the ileum but most of the loops show no narrowing—only extrinsic pressure defects with there appearing to be a somewhat rigid appearance to the loops of small bowel caused by these mesenteric masses (Figure 2)."



Figure 2

Dr. Meena: "Do you think that's extraluminal or extrinsic."

Dr. Henderson: "The larger masses seem to be entirely extrinsic to the colon. The smaller masses appear to be extrinsic but could possibly be intramural, that is, invading the muscularis."

DISCUSSER'S DIAGNOSIS

Dr. Meena: "Well, if these are multiple polyps throughout the entire cecum, I mean throughout the entire colon, with small and large masses causing constrictive changes and some destructive changes of the mucosa and then she returns with large masses in the mesentery and a great deal of emphasis is put on fibrosis, one is hard put to come up with a benign lesion that would cause this much damage unless you consider von Recklinghausen's disease which would be mighty unusual. I'd also like to ask about the urinary tract trouble. All we have in here is that she had some trouble with the urinary tract. What does that mean?"

Dr. Louis Schiesari: "Nothing important; that was just mentioned in the history."

Dr. Meena: "Nothing important at all? Well, if you consider that it has to be some type of tumor one would wonder whether or not this was a slow growing tumor; 15 months and she has done fairly well so you would certainly not consider a high grade malignancy. I personally, have come to the conclusion that it is probably a lymphoma of some type in the colon, particularly since it involves the sigmoid and the ileo-cecal area. This is the area that lymphoma most likely involves. She did all right for 15 months and then came in with large masses in the mesentery which certainly could be explained on the basis of a lymphoma. Lymphoma, however, does not usually give a picture of polypoid lesions. That would be unusual and this has me a little buffaloed as to exactly what the disease process is. The degenerating lipoma she had in her neck four or five months prior to surgery, I do not believe, is significant. I don't think that lipomas or a purely benign process would give you this many changes in the colon per se and I am going to have to end up with a diagnosis of one of the lymphoma groups and probably a lymphosarcoma starting in the colon and progressing into the mesentery."

Dr. Schiesari: "Dr. Williams performed the second operation on this patient and is going to tell us more about her and a syndrome with which not too many are familiar."

FINDINGS AT SURGERY

Dr. Thomas K. Williams, Jr.: "This is the first case of this type that I have ever seen. Even after seeing it, we were not fully aware of what we were dealing with until several articles appeared in the literature recently. These are not the journals that I usually read. An important item was left out of the protocol and this may have been of help to making the diagnosis. This is the fact that this woman had multiple polyposis of the colon with low-grade carcinomas in some the polyps and a total colectomy and ileostomy had been done for this condition. Her subsequent course following that surgery had been perfectly benign. At the initial surgery, the surgeon did not find any evidence of any metastatic disease in the abdomen.

"In March of this year she began to have recurrent bouts of abdominal pain, occasionally nausea, and at times the ileostomy would not move as we would expect with a mechanical obstruction and at other times she would have a lot of diarrhea. At any rate, at the time I first saw her, I did not think that she was clinically obstructed. However, she had these masses in her abdomen which were palpable and were very hard and firm. We ordered the G.I. and small bowel series which you have seen. There was no evidence of any intraluminal obstruction but certainly there was an x-ray picture compatible with a partial obstruction from extrinsic pressure, and this would go along with my clinical impression at that time.

"We explored her and found just what has been described, a mass in the mesentery that was stony hard, fibrotic, involving all of the mesentery of the small bowel. The mass came up to the bowel wall but did not invade or involve it. There was no complete obstruction, but it was evident that the mass could partially obstruct the lumen of the small intestine from its size and position. It would have been necessary to remove all of the small bowel to remove the mass, which was the mesentery of the small bowel. Therefore, we biopsied the mass and closed her. Dr. Hare, on frozen section, said initially that there was just a lot of fibrosis and then later perhaps a low-grade fibrosarcoma or something of that nature. You want me to discuss the Gardner's Syndrome?"

Dr. Schiesari: "Go ahead, yes."

Dr. Williams: "This woman has done well since the last surgery except that she has continued to have recurrent episodes of pain. So far, she has not presented with obstructive symptoms again. In the April 1964 issue of *Cancer*[1] an article appeared from the Mayo Clinic describing 22 cases, 7 which they had seen, and 15 collected from the literature, of the so-called Gardner's Syndrome or mesenteric fibrosis associated with people who have had familial polyposis and have had colectomies and various other procedures with or without cancer being present. Gardner's Syndrome was described by a man obviously named Gardner who was following a patient with familial polyposis. He noticed in this family that those people who had polyposis and had a colectomy developed several other lesions including sebaceous cysts, lipomas, multiple fibromas throughout the body, dental caries, osteomas of the bone, and various things of this type. It was apparent in this family that the ones who had multiple polyposis were the ones who had all of these associated conditions, where as the members of the family who had no trouble did not, so he called this a syndrome and described it and we think now that this is what the woman has as she fits into this category very nicely.

"It is of interest from the surgical standpoint because these people will be seen as a rule for intestinal obstruction and in those cases reported most of them were operated on for this. Other than this, however, this condition is apparently a benign thing. Most of the patients reported from Mayo are living anywhere from 2 up to 5 or 10 years. The patients who have died have died from metastatic carcinoma which was not removed when the colectomy was done, and one patient died of apparently a low-grade fibrosarcoma. Apparently, all the rest are living and doing well with varied symptoms. Some of them have pain, some have recurrent obstructive episodes and apparently some of them have not any trouble except that they can feel a mass in the abdomen. I did run across an article in the *American Journal of Gastroenterology*[2] that reported a mesenteric fibrosis of the peritoneum in a similar case.

"This patient continues to do well with the exception of recurrent bouts of abdominal pain. There is a possibility that she may end up addicted, although so far we have managed to keep her from it. But I have been unable to find, even after reviewing the literature referred to in the initial article, anything about the use of steroids on these people. This patient was initially Dr. William O. Barnett's patient, and he did the colectomy on her and in talking to him and Dr. Hare, we decided to put her on steroids to see if they would have any effect on the fibrosis. I can't really say

whether they have or not except that she was taken off steroids at one time in early June and it was following this that she had her most severe attack. So we have put her back on Prednisolone and plan to continue it indefinitely."

Dr. Meena: "I've a question I'd like you to answer for us. Explain the fibrosis in the cecum and terminal ileum."

Dr. Williams: "Apparently in the discussion in a couple of the cases that they described from Mayo Clinic this fibrosis occurs in the mesocolon and around the colon, too. As a matter of fact, in the two patients that they lost from cancer they could not remove the lesion because of the extensive fibrosis around the rectum, and it was a technical impossibility to get it out. Apparently, these people can have the multiple polyposis, familial, and the fibrosis that they get can involve the large bowel as well as the small one if it has gone on long enough."

PATHOLOGY REPORT

Dr. William V. Hare: "I was fortunate in being invited to surgery to take a look at the mesentery grossly. That was actually after I tried a frozen section, but after the frozen I was particularly anxious to see the gross lesion. It was so hard and white I thought it might be a sclerosing lymphoma, grossly, and I think this is the first thing one would suspect looking at the gross lesion without knowing about the polyposis or any other clinical features. Then, microscopically, with it looking like a keloid or proliferating scar tissue I thought we might be dealing with a desmoplastic or fibrotic carcinoma except that we couldn't find the tumor cells (Figure 3). The thing that's impressive to me is why she was not obstructed. I'd like to ask Dr. Williams and the radiologist if she's getting fairly normal peristaltic rushes. I don't see how she could. It looks as though the fibrosis would cut off the blood supply and make the bowel too rigid for good peristalsis."

Dr. Williams: "When she gets these attacks of abdominal pain she has hyperactive peristalsis, and it is compatible with an obstructive episode, but I don't know."

Dr. Henderson: "One does get the impression that many of these loops are relatively thick and possibly rigid. This does not necessarily indicate a decrease in transit time of the barium through the small intestine. For example, in linitis plastica type of carcinoma of the stomach in which there is excessive fibrosis of the wall, there will be an extremely rapid passage of the barium through the stomach. In fact it passes so rapidly that it is even difficult to obtain films of the stomach in such a carcinoma."

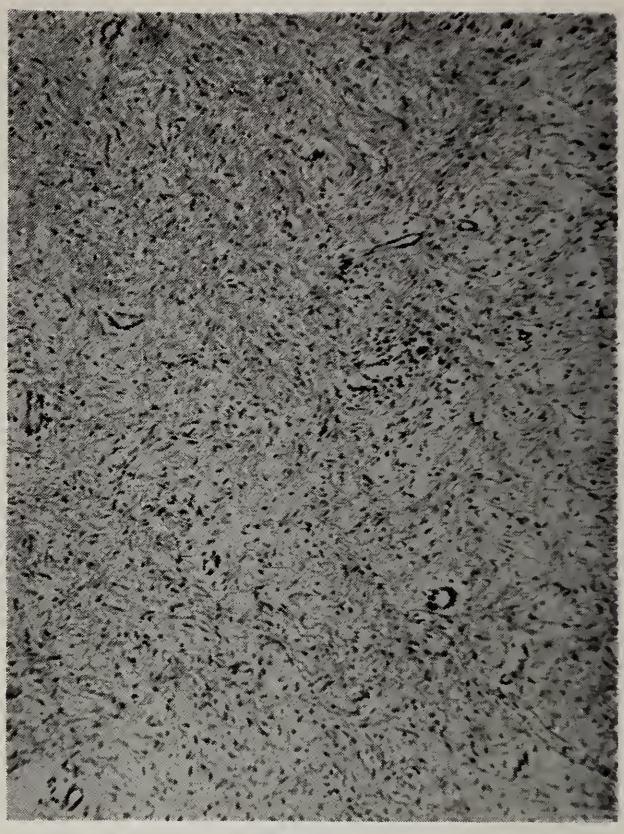


Figure 3.

Dr. Hare: "The terminology applied to these lesions is confusing. I think we could readily have called this a low grade fibrosarcoma, and this is always a differential problem with the fibromatous group. If we say fibrosarcoma and it doesn't metastasize, the clinician thinks the pathologist just made a mistake. Most of these in the past have been called fibrosarcomas, not necessarily in the mesentery but all around the body. I am not sure the term fibromatosis is the best answer because that doesn't tell whether the lesions are benign or malignant. A lot of them recur and kill but don't metastasize."

Dr. Eugene J. Thomas: "Is the mass getting smaller on cortico-steroids?"

Dr. Williams: "No. I thought so at one time but I've seen her since and I don't think so now."

Dr. Henderson: "On her follow-up studies we had the impression that the mass might be smaller.

Dr. Williams: "Well, I thought so, initially. When we first put her on the steroids they seemed to get smaller and this was the opinion of several of us. But, since that time she has been back in

and I really can't say that they are. They are still present, and I think they are still about the same size."

Dr. Henderson: "This is not like measuring a mass in the parenchyma of the lung, but in attempting to compare films of the small bowel taken one month apart with about the same loops demonstrated, the masses in the omentum causing the extrinsic pressure defect seem to be smaller."

Dr. Schiesari: "In the specimen from the first operation there was some degree of fibrosis in the mesentery of the terminal ileum, and the fibrotic process involved most of the circumference of the bowel without, however, producing narrowing of the lumen. Patients with this syndrome are prone to develop fibromatosis with any type of abdominal surgery; and in fact this patient years before the colectomy had a cholecystectomy and hysterectomy, with appendectomy. Then, very likely, the colectomy, enhanced and accelerated the mesenteric fibromatosis. It is significant that the first report of the Gardner Syndrome appeared in the *American Journal of Human Genetics*[3] in 1953, perhaps to emphasize the familial hereditary pattern of this syndrome." ★★★

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NATIONALISTIC DYING

Frustrate a Frenchman, and he will drink himself to death; frustrate an Irishman, and he will die of anger-induced hypertension; frustrate a Dane, and he will shoot himself. But if you frustrate an American, he will get drunk, shoot you, establish a $1 million aid fund for your surviving relatives, and then die of ulcer.

—Milton Golin in *Medicine at Work*



The President Speaking

'The Best Image'

OMAR SIMMONS, M.D.
Newton, Mississippi

THE GREAT DEBATE over how medical care shall be provided seems to include a constant quantity, even in the opposing philosophies of embattled adversaries. It's this matter of talking and writing of medicine's image. At best, the term is ill-defined, and it is usually employed to the advantage of the user. For many, the term "image" is of Madison Avenue coinage, but to the extent that it sums up public attitude toward a product, corporation, institution, or profession, then it's a valid reference.

Within our profession, we often hear advocates of certain courses of action underwriting their proposals by assuring that we may thereby "improve the physician's image." On the other hand, we hear dire warnings that a given policy, if adopted, would "hurt our image." Outside the ranks of medicine, there are numberless experts on the public's concept of the American physician. In the final analysis, the case for the image is probably overstated.

Whatever the public's composite attitude toward medical care may be—and, indeed, this attitude matters very much to medicine —it all boils down to whether the public understands and recognizes *who* is responsible for scientific progress in relieving suffering and prolonging human life, together with such factors as the availability of care, the advantages to the care-consuming public of voluntary financing mechanisms, and the ultimate determination of the profession to try to work itself out of a job.

Physicians may be much better advised to think in terms of communicating these achievements and goals rather than becoming overly concerned about something that is poorly defined. When the individual doctor does his best in serving his patient, he has made for himself the best possible image. ★★★

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EDITORIALS

Are We Failing Our Medical Missionaries?

I

THE BESTIAL, OUTRAGEOUS murder of American nationals, including a medical missionary, in the Congo brings into clear focus the glaring inconsistency between the administration's self-proclaimed humanitarian compassion and its foreign policy. The former, it seems, is domestic vote bait, while the latter is a disgraceful abandonment of national interests. Simultaneously, there is demonstrated a new facet of courage and dedication in American physicians who are willing to risk—and even give—their lives on foreign soil, knowing that there the flag flutters weakly and that the Marines aren't coming.

When the republic was scarcely in its political majority, it went unhesitatingly to war with the world's greatest sea power over the rights of a few able-bodied seamen. Now, the nation's wealth is poured out to tin horn tyrants who, with arms from Albania and Czechoslovakia and ideologies from Peiping and Moscow, make a daily ritual of sacking our embassies, taking our properties, insulting our flag, and murdering our citizens. Despite all this, more than 2,000 American physicians are voluntarily engaged in bringing the world's best medicine to the peoples of dozens of nations on three turbulent continents.

Under the best conditions of foreign service, a U. S. physician works hard, keeping 18 hour days, scratching for drugs with which to treat diseases unknown in this nation, and earning very little in monetary compensation. He faces hardship, fear, superstition, and ignorance. Not infrequently, he becomes a casualty of disease with no colleague to treat him.

II

For a growing number of American doctors, the desire to serve in remote places is stronger than the hardship encountered in the service. The American Medical Association's Department of International Health received about 1,000 inquiries in 1964 from physicians who wanted to offer their time and skill for varying periods of service abroad. At the moment, there are nearly 700 U. S.-sponsored foreign health projects and more than 350 American-supported hospitals overseas.

In the medical missionary field, Protestant denominations support about 700 American physicians in foreign service, and the Roman Catholic Church, about 50. Nonsectarian charities account for around 200, with Care-Medico sponsoring 150 and Project Hope using 35 to 40 volunteer doctors on two to three month tours. Another 200 physicians are scattered over the world with agencies of the government, including the Agency for International Development (AID), the U. S. Public Health Service, National Institutes of Health, and the Peace Corps.

If the American physician's desire for overseas service is growing, so is the demand for his services. AMA has became a literal clearinghouse for urgent requests for doctors from African, Asian, and Latin American countries. They want not only general practitioners but also nearly every specialty. A pressing need is for medical faculty in foreign medical schools, so that the forward thrust in raising health levels by missionaries can someday be maintained by native physicians.

III

American medicine is doing a lion's share in support of medical missionaries. AMA assistance to physicians in distant spots includes the furnishing of scientific publications without charge. It elects them to dues-free membership, enhancing their opportunities for communications with domestic colleagues. In the Chicago headquarters, a sort of medical state department is maintaining extensive files and reference sources on each remote nation, carefully classifying disease entities likely to be encountered. The service even includes information on demography, sanitation, travel and communications facilities, and schools.

Offering a helping hand in the perpetual quest for adequate supplies for the medical missionary, AMA publishes its *Directory of International Medical Materiel Collection Programs,* a document virtually unknown to the American physician. The current issue identifies more than 35 voluntary, nonprofit organizations, giving details on their respective programs for securing and distributing journals, texts, supplies, equipment, drugs, and those essentials of practice taken for granted on Main Street, U. S. A.

The American pharmaceutical industry renders yeoman service to the doctor in the jungle. Most major drug makers give generously through the several voluntary organizations. Recently, Smith Kline and French offered to restock completely the hospital of the late Dr. Paul Carlson at Wasolo after he was murdered by the Congolese rebels. The work of this company is representative of most members of the ethical pharmaceutical industry.

IV

But it will never be enough to send drugs and dollars to the American physician who, through high personal sacrifice, makes himself the vector by which medical progress is beamed from this nation into those dark blotches on the globe. It is never enough to create a memorial scholarship fund in memory of a medical missionary who got a communist bullet for professional services rendered.

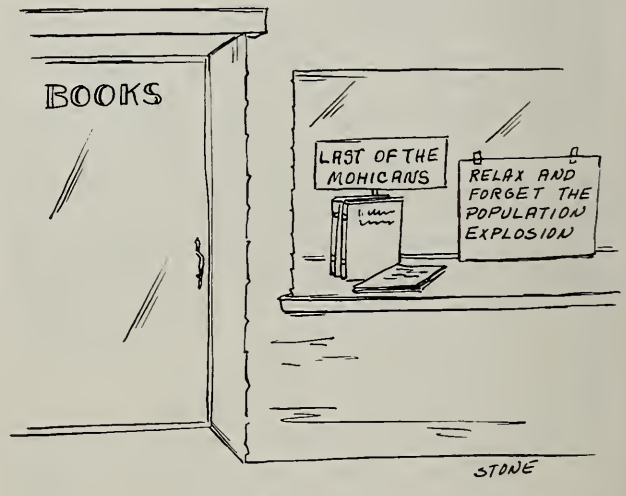
The time is past and the hour is late: The most powerful nation on earth can do no less than extend the protection of life to those who, in the service of their fellow man, are among the best ambassadors we shall ever have.—R.B.K.

Tricky Twists In the Hill-Burton Act

The 1964 amendments to the Hill-Burton Act contain legislative twists and innovations which could alter the concept of the program. The revisions, tagged as Public Law 88-443, enacted through passage of H.R. 10041, formalize areawide planning into law, project appropriations authority for five years through June 30, 1969, including the present fiscal year, and require representation of "consumers" on state hospital advisory councils.

Two and a half million dollars are provided for even matching by the states in establishing areawide planning projects. Most state medical associations, including Mississippi, and the American Medical Association oppose compulsory areawide planning. At the recent Miami Beach clinical convention, AMA's House of Delegates went so far as to recognize the dangers inherent in such compulsion. Just how the state-initiated areawide planning project will pan out with half federal funds really remains to be seen.

A second significant amendment was a drastic revision of the advisory council composition. Since



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initial enactment, Hill-Burton has required the participating states to furnish the administering agency an advisory council "which shall include representatives of nongovernmental organizations or groups and of public agencies concerned with the operation, construction or utilization of hospitals or other facilities for diagnosis, prevention or treatment of illness or disease or for provision of rehabilitation services. . . ." This has been the basis for representation on state bodies of medical and hospital associations, departments of public health, and similarly oriented public and private entities.

Now an unusual addition has been made: The advisory council must also include "an equal number of representatives of consumers familiar with the need for services provided by such facilities." Most active in "consumer representation" in other public programs are labor unions.

Finally, the Congress wrote a far-reaching appropriations authority into the law, providing $100 million for chronic care, diagnostic and treatment facilities, and rehabilitation centers and an additional $50 million for hospital construction and modernization for each of the fiscal years ending June 30 from 1965 through 1969. Beginning in 1966, a progressive increase of $10 million per year is further authorized.

These innovations will raise questions in many quarters as to the future of Hill-Burton, and many answers will obviously repose in federal interpretation of the amendments.—R.B.K.

1964's Medical Headlines

A favorite Sunday feature of newspaper editors at the end of the year is a review of the ten biggest stories. Not to be outdone by the popular press, AMA has summed up major medical headlines of 1964 for the American scientific press. These were judged to be the six top developments:

—The finding of strong evidence for the viral theory in leukemia, stirring hope for early validation of a virus-leukemia relationship.

—The apparent inducing of human viral hepatitis in a laboratory animal which, if and when substantiated, might be the beginning of a breakthrough in hepatitis vaccine research.

—The harsh judgment on cigarette smoking delivered by the Surgeon General's Advisory Committee on Smoking and Health and the resulting action in this respect taken by medical organizations.

—The emergence of the laser (light amplification by stimulated emission of radiation) as a potentially powerful weapon against some types of cancer and ultrasound as an important diagnostic tool.

—The American Medical Association's and Food and Drug Administration's new partnership on exchanging information as to new drugs and drug therapy.

—The encephalitis outbreak of epidemic proportions in Texas and New Jersey with a substantial scattering of cases in other states.

Some may feel that 1964 was rather unremarkable as to medical progress, but science is, happily enough, a cumulative endeavor, and the unreported work of a single investigator last year could provide the biggest news of 1965.—R.B.K.



The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

FLOWERS, WILLIAM MELVIN, JR., Jackson. Born Jackson, Miss., July 9, 1933; M.D., Tulane University School of Medicine, New Orleans, La., 1957; interned University of Mississippi School of Medicine, Jackson, one year; radiology residency, University of Mississippi School of Medicine, Jackson; captain, U. S. Air Force, two years; elected Nov. 3, 1964, by Central Medical Society.

LOWICKI, EDWARD MAKARY, Jackson. Born Wilmington, Del., Sept. 23, 1931; M.D., Johns Hopkins University School of Medicine, Baltimore, Md., 1957; interned University of Virginia Hospital, Charlottesville, one year; residency, University of Virginia Hospital, Charlottesville, five years; residency, Wadsworth General Hospital, Los Angeles, Calif., one year; elected Nov. 3, 1964, by Central Medical Society.

OVERTON, CLAYTON JUSTUS, JR., Greenville. Born Jackson, Miss., Jan. 3, 1933; M.D., Tulane University School of Medicine, New Orleans, La., 1957; interned Charity Hospital of Louisiana, New Orleans, one year; orthopedic surgery residency, Charity Hospital of Louisiana, New Orleans, four years; elected Oct. 14, 1964, by Delta Medical Society.

State Morbidity Reported Through Nov. 27

The Mississippi State Board of Health reports the following occurrence of morbidity for 1964 through the 48th week of the year, ending Nov. 27, 1964. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul.	942
Tuberculosis, O.F.	199
Salmonella infections	54
Brucellosis	3
Encephalitis, infectious	28
Typhoid Fever	5
Dysentery	
Bacillary	73
Amoebic	12
Dysentery, N.O.S.	3
Food Poisoning, N.O.S.	5
Diphtheria	5
Septicemia, Staph.	25
Septicemia, Strep.	1
Septicemia of newborn	1
Diarrhea of newborn	8
Septicemia, N.O.S.	15
Septicemia, Other	1
Meningococcal infection	24
Meningitis, O.F.	49
Gastro-enteritis	4
Tularemia	5
Mononucleosis, infectious	72
Toxoplasmosis	2
Hepatitis, infectious	222
Hepatitis, serum	1
Tetanus	5
Bacterial Diseases, Other	1
Poliomyelitis	1
Helminthic infections	
Hookworm	1,015
Ascariasis	283
Strongyloides	63
Blastomycosis	3
Histoplasmosis	21
Sepsis, puerperal	8
Rheumatic fever	4
Myelitis	2
Polyneuritis	1
Moniliasis	1
Adenovirus	2
Mycotic, N.O.S.	1
Other inf. and parasitic diseases	1
Streptococcus infections	
Scarlet fever	149
Strep throat	3,017
Taeniasis	8
Pertussis	120
Measles	6,746
Chickenpox	1,059
Mumps	956
Other Cestode Infestations	11
Influenza	452
Gonorrhea	4,775
Syphilis	
Early	505
Late	138

DEATHS

BYERS, HOWARD FALCONER, Senatobia, M.D., Memphis Hospital Medical College, Tenn., 1906; died Oct. 24, 1964, aged 85.

PERSONALS

M. E. HINMAN has been named president of the Vicksburg Historical Society.

FLOY JACK MOORE, chairman of the department of psychiatry, University of Mississippi School of Medicine, was named vice president of the Southern Psychiatric Association during the group's 1964 annual meeting.

K. RAMSAY O'NEAL of the Hattiesburg Clinic recently addressed the American Association of University Women on the Subject "New Advancements in Medicine."

R. A. STREET, JR. has been elected a director of the Vicksburg Chamber of Commerce.

Book Reviews

Atlas of General Surgery, Second Edition. By Joseph R. Wilder, Director of Surgery, Hospital for Joint Disease, New York, N. Y. Illustrated by Shirley Baty. 325 pages with illustrations. St. Louis: The C. V. Mosby Company, 1964. $23.50.

This book is a complete revision of the first edition published in 1955. The entire text has been revised and many illustrations have been redrawn. New procedures have been added including sections on vascular surgery, hand surgery, and pelvic surgery.

As the author states, this book was published in response to stimulating teaching discussions with medical students and with surgical interns and residents. The contents include 105 procedures. Each operation is treated as a separate entity with excellent illustrations accompanied by a concise legend briefly describing the operative technique.

The book covers the more common surgical procedures beginning with operations upon the head and neck and extending through operations on the extremities. There is a special section by Dr. Emmanuel B. Kaplan on hand surgery and a section on gynecological operations by Dr. Stanley J. Birnbaum. Dr. Wilder makes no claim for originating any of the operations but states that they represent the method which in his experience is found to be the safest and most successful.

The author presents the most generally accepted technique or "standard procedure" for a given operation, often with an alternate procedure when such may be indicated.

This book should be extremely valuable to the surgeon in training and even to the seasoned surgeon as a quick reference.

Overall, the book is excellent. Important considerations are outlined in the legend, and a step-by-step description of each stage of the operation is included. The illustrations are clear and concise and are detailed enough to be adequate but not confusing.

I consider this book a valuable addition to any surgeon's library.

GEORGE H. MARTIN, M.D.

Physical Examination of the Surgical Patient. ed. 3. By J. Englebert Dunphy, M.D., and Thomas W. Botsford, M.D. 396 pages with illustrations. Philadelphia: W. B. Saunders Company, 1964. $8.50.

The emphasis in the third edition of this book is placed primarily on methods of physical examinations, which are not so well covered in standard texts, but which are so greatly needed by every physician and surgeon. Excellent demonstrations of technique are presented by illustrations and photography. These techniques are required only if an abnormality is detected in the course of routine physical examination.

Illustrations and diagrams are masterfully presented in order to demonstrate the technique of examination of a given area of the body, as well as to clarify the positive findings on physical examination.

There is an unusually valuable chapter on examination of the injured patient. Although this is primarily a book of procedure, much about the underlying disease process is enthusiastically discussed.

The authors have demonstrated that the principle of physical examination does indeed change as the surgical approach to a specific disease is altered. This book should be of definite value in the development of precision and skill in surgical practice.

DAWSON B. CONERLY, M.D.

Books Received

Experience in Renal Transplantation. By Thomas E. Starzl, Ph.D., M.D. 383 pages with illustrations. Philadelphia: W. B. Saunders Company, $17.00.

Respiratory Function in Disease. An Introduction to the Integrated Study of the Lung. By David V. Bates, M.D. and Ronald V. Christie, M.D.; 566 pages with illustrations. Philadelphia: W. B. Saunders Company, $15.50.

Doctor's Easaccount Record System. Philadelphia: W. B. Saunders Company, $9.50 the set; singly: Disbursements—$4.00, Income—$5.50.

MEETINGS

NATIONAL AND REGIONAL

International College of Surgeons, North American Federation, April 25-29, 1965, Las Vegas, Nev. Mr. Stanley Henwood, Executive Director, 1516 Lake Shore Dr., Chicago 60610.

American College of Surgeons, Oct. 18-22, 1965, Atlantic City. John F. North, Director, 55 E. Erie, Chicago 11, Ill.

STATE AND LOCAL

Mississippi State Medical Association, May 10-13, 1965, Biloxi. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Amite-Wilkinson Counties Medical Society, Third Monday March, June, September, December. S. E. Field, Centreville, Secretary.

Central Medical Society, First Tuesday, January, March, May, September, November, December, 6:30 p.m., Robert E. Lee Hotel, Jackson. Jim G. Hendrick, 800 Carlisle St., Jackson, Secretary.

Claiborne County Medical Society, First Monday January and July, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Third Wednesday March and First Wednesday November, 2:00 p.m., Clarksdale. Whitman B. Johnson, Jr., 422 McWilliams Building, Clarksdale, Secretary.

Coast Counties Medical Society, Second Wednesday January, First Wednesday March, May, July, September, November. Charles D. Taylor, Jr., 113 Davis Ave., Pass Christian, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Monthly, 7:30 p.m., Natchez Country Club, Natchez. W. T. Colbert, Natchez General Hospital, Natchez, Secretary.

North Central District Medical Society, Second Wednesday March, June, September, and December. William E. Riecken, Jr., P. O. Box 831, Kosciusko, Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo. S. Jay McDuffie, Nettleton, Secretary.

North Mississippi Medical Society, First Thursday April and October, Oxford. Vernon B. Harrison, P. O. Box 36, University, Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. Joseph C. Griffing, Lucius Olen Crosby Memorial Hospital, Picayune, Secretary.

South Central Mississippi Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. James C. Bass, Jr., 424-13th Ave., Laurel, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg. Patrick G. McLain, 1301 Washington St., Vicksburg, Secretary.

Dr. Vise Named To High SMA Office; Recognition Award Given Dr. Guyton

Dr. Guy T. Vise of Meridian was named first vice president of the Southern Medical Association during SMA's Nov. 16-19 meeting in Memphis. Dr. Vise served as chairman of SMA's governing Council during the 1962-63 term.

President-elect of the association, which is made up of physicians from 16 Southern or Southern border states, is Dr. Garber Galbraith of Birmingham, Ala. Dr. R. H. Kampmeier of Nashville, Tenn., is the incoming president. He succeeds Dr. Robert D. Moreton of Fort Worth, Texas.

Another Mississippian honored during the four day meeting was Dr. B. S. Guyton of Oxford, Miss., who received the special recognition award of the Southern Medical Association. The presentation was made by SMA President Robert D. Moreton during the Nov. 17 President's Luncheon.

Meeting in Memphis for the first time since 1939, association members participated in more than 20 separate programs. Symposiums were conducted on drugs as they relate to hospitalized patients and outpatients, problems of adolescents, and medical concern over increasing venereal disease.

Speaking to a luncheon meeting, Dr. F. J. L. Blasingame, AMA executive vice president, said President Johnson's recent landslide election victory may present history's greatest danger to medicine as a free institution. The AMA official said the overwhelming victory would probably be incorrectly translated by the Administration into a mandate for numerous welfare state programs "including medicare near the top of the list."

Urging the doctors to campaign actively against such welfare programs, Dr. Blasingame said times demand that physicians, besides being competent



Dr. B. S. Guyton of Oxford, standing left, received the Southern Medical Association special recognition award during the group's Nov. 16-19 meeting. Making the presentation is Dr. Robert D. Moreton of Fort Worth, outgoing president. Seated on the rostrum are, from the left, Dr. R. H. Kampmeier of Nashville, incoming president; Dr. F. J. L. Blasingame of Chicago, AMA executive vice president; Dr. R. Paul Caudill, pastor, First Baptist Church, Memphis, Tenn.; Dr. Oscar B. Hunter, Jr. of Washington, D. C., chairman of the SMA Council, and Dr. Benjamin F. Byrd, Jr. of Nashville, councilor from Tenn.

professionals, become more deeply involved in public affairs. "Mr. Johnson is a master politician and will not readily take up an issue when public opinion is opposed to his doing so. Such could be the case for medicare tax in spite of his previous commitments, especially if public education is effective in pointing up the costs and fallacies of the King-Anderson (Medicare) type of proposals . . ."

Medicare, Dr. Blasingame said, is just one area in which "most of our citizens fail to appreciate many of the consequences of the welfare states conception of the socializers."

Predicting that this nation will crumble if it is built upon such a something-for-nothing foundation, Dr. Blasingame also warned, "If men yield to the blandishments and the honeyed words of those who proclaim the welfare state is the answer to all their problems, the destiny of mankind is not the stars but the slime from which he rose."

Another unusual feature of SMA's 58th Annual Meeting was seven scientific color television programs filmed "live" from operating rooms at John Gaston Hospital. Screened for physicians only, the films depicted techniques in eye, ear, obstetrics, plastic surgery, and other operations.

South Society Names Dr. Landry President

Dr. Victor E. Landry of Lucedale was named president of South Mississippi Medical Society during the group's Dec. 10 meeting.

Dr. W. E. Folse of Collins was elected vice president and Dr. James C. Bass, Jr., of Laurel was re-elected secretary-treasurer.

Internists Convene For Fall Meet

The Mississippi Society of Internal Medicine convened for its fall interim meeting in Jackson on Oct. 31, 1964.

Dr. Roger Arhelger, of the Department of Pathology, University of Mississippi School of Medicine, presented an illustrated talk on present and future applications of electron microscopy to clinical medicine and research.

The business session included an appearance by Mr. E. P. Rawson, coordinator for the Disability Determination Unit of the state Division of Vocational Rehabilitation. Mr. Rawson expressed his appreciation to the internists for their excellent cooperation and service as consultative examiners for the disability program.

The regular spring meeting of the Society will be held during the MSMA 97th Annual Session at Biloxi in May, 1965. Dr. S. H. McDonniel is the current president of the Society, and Dr. C. E. Wallace is secretary-treasurer. Dr. Guy Gillespie was chairman of the committee on arrangements.

Dr. Werlein Receives Fifty Year Club Insignia

Dr. Presley E. Werlein of Biloxi was presented the Fifty Year Club pin and certificate during a recent meeting of the Coast Counties Medical Society.

Dr. Werlein is a 1914 graduate of Tulane University School of Medicine. He interned at O'Connor Hospital in San Jose, California, and served his residency at Charity Hospital and EENT Hospital in New Orleans.

Dr. Werlein retired from a practice limited to EENT in 1955.

During the society's business meeting, Dr. Frank Gruich of Biloxi was installed as president. Other officers elected to serve with him were Dr. Emile Baumhauer, Jr., Pascagoula, president-



Dr. P. E. Werlein of Biloxi, left, was inducted into the Fifty Year Club during the November meeting of the Coast County Medical Society. Dr. Gerald D. Wessler of Gulfport is shown presenting Dr. Werlein his certificate.

elect; Dr. Robert F. Carter, Jr., Biloxi, vice president; Dr. C. Hal Cleveland, Gulfport, treasurer. and Dr. C. D. Taylor, Jr., Pass Christian, secretary.

Mid-South Sets 76th Meet

The 76th Annual Meeting of the Mid-South Postgraduate Medical Assembly is scheduled for Feb. 9-12 at the Peabody Hotel in Memphis.

Further information and program material may be secured from Leslie H. Adams, executive secretary, 774 Adams Avenue, Memphis, Tenn.

Jaycee Professorship Established at UMC

Dr. Gerald Pascal has joined the faculty at the University of Mississippi School of Medicine as Mississippi Junior Chamber of Commerce Professor of Psychiatry.

This professorship at the Medical Center was established this fall by the state Jaycees mental health committee, the fruition of the organization's search for the most effective way to promote better mental health for the entire state. Ultimate goal is to endow a chair in mental health at the Center by 1965.

The new professor comes to Jackson from the University of Tennessee, where he has been professor of psychology and director of the clinical psychology training program. He has trained 65 Ph.D. recipients. His research interests are twofold: reducing the factors which cause mental illness to a formula so that treatment can be as precisely prescribed as possible and predicting so-called unprovoked homicides.

Dr. Pascal has an A.B. degree from the University of California, an A.M. from Harvard, and a Ph.D. from Brown where he was chief psychologist. He served his internship at Massachusetts General Hospital, taught at the University of Pittsburgh, and was research psychologist at Western Psychiatric Institute and Clinic.

Among the professional societies in which Dr. Pascal holds membership is Sigma Xi. He is chairman of the V. A. Psychology Advisory Council for the southeast area, a Fellow in the American Psychological Association, and Diplomate, American Board of Examiners in Psychological Hypnosis. He has written three books and more than 50 papers.

State Participates in AMA Mental Meet



Leading a Mississippi delegation of more than 20 representatives to AMA's Second National Congress on Mental Illness and Disease at Chicago were Drs. James G. Thompson of Jackson, member of the Board of Trustees of Mental Institutions, left, and W. L. Jaquith of Whitfield, director of the Mississippi State Hospital, right. At the opening session, they conferred with Dr. Donovan F. Ward of Dubuque, Iowa, AMA president, who delivered the keynote address.

Scientific Exhibits Invited For MSMA's 97th Session

Prospective scientific exhibitors for MSMA's 97th Annual Session are invited to submit their space applications to the Council on Scientific Assembly, according to Council Chairman Dr. James L. Royals.

Scheduled for May 10-13, the four-day meeting will have its headquarters in the Buena Vista Hotel in Biloxi. The scientific exhibit will be located in Hurricane Room D and will be open only to registered members and guests. MSMA policy precludes opening scientific and technical exhibits to the general public.

First preference of limited space available in the scientific exhibit will be given members of the state medical association, said Dr. Royals. Other applicants eligible for consideration are out-of-state physicians and organizations and foundations having scientific presentations to make.

MSMA members presenting scientific exhibits are eligible for the scientific achievement award. Given for the first time in 1963, the award is a

mounted medallion designed especially for MSMA by L. G. Balfour Company of Attleboro, Mass. The winner's name and year will be engraved on the medallion which supersedes the gold medal award of previous year. Nonmembers exhibitors will compete for citations of honorable mention.

Dr. Royals stressed that letters of application should state the subject of the exhibit, physician or organizational sponsors, and minimum space requirement. Letters should be addressed to MSMA headquarters at 735 Riverside Drive, Jackson. Selection of exhibits will be made by a special committee of the Council on Scientific Assembly during early January 1964, said Dr. Royals.

Ground rules for the scientific exhibits prohibit mention of pharmaceutical or medicinal products by proprietory name. All booths must be attended during meeting hours by sponsors, who are also responsible for erection and dismantling of exhibits.

UMC Circuit Courses Turn South

Circuit course lecturers are readying their talks for the southern series which begins in Biloxi on Jan. 13 and Hattiesburg on Jan. 14. Hosts for the dinner meetings, which are set for 6:30 p.m. once a week for three weeks, are Howard Memorial Hospital with Dr. Eldon L. Bolton of Biloxi as chairman, and Methodist Hospital, with Dr. A. T. Tatum of Petal making the local arrangements.

First session speakers are Dr. D. T. Imrie, clinical assistant professor of orthopedic surgery who will discuss operations for arthritis; Dr. Edward M. Lowiki, assistant professor of surgery, whose subject is surgery problems of the parathyroid gland, and Dr. W. A. Neely, associate professor of surgery, whose topic is systemic manifestations of lung cancer.

Representing the department of obstetrics-gynecology, Dr. James L. Royals, clinical assistant professor, and Dr. Charles M. Head, clinical instructor, will describe use of hormones and induction of labor at the second session on Jan. 20 and 21. On the same program Dr. Blair Batson, department chairman, and Dr. Margaret Batson, associate professor of pediatrics, will talk about liver disease and perceptual disorders in children.

For the final session on Jan. 27 in Biloxi and Jan. 28 in Hattiesburg, Dr. Ben Johnson, associate professor of medicine, will talk about pyelonephritis; James Suess, assistant professor of psychiatry, will discuss office treatment of depression, and Dr. Herbert Langford, professor of medicine, will discuss thin bones.

The second session for the specially arranged Laurel series is scheduled Feb. 9, the regular quarterly meeting of the Jones County Medical Society to which other physicians in that area are cordially invited. They will meet at the Laurel Country Club for dinner at 7 p.m. Speakers will be Dr. G. E. Arnold, associate professor of surgery, who will speak on new trends in otolaryngology, and Dr. Coupery Shands, clinical assistant professor of surgery, whose subject is soft tissue sarcomas.

The Mississippi State Medical Association and the Academy of General Practice cooperate in planning this postgraduate series, which is in its seventh year. The Academy grants 11 hours of category 1 credit to its members who attend all sessions. E. R. Squibb supports the entire program with an educational grant to the UMC postgraduate education committee.

Legion Donates Funds For Sanatorium Lab



Representing the American Legion, Department of Mississippi Dr. H. C. Ricks, Sr., left, of Jackson presents Dr. Clyde A. Watkins, right, superintendent of the Mississippi State Sanatorium, a check for an air conditioner for the Sanatorium lab. Looking on is Jim Gorman, lab technician.

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION
JACKSON, MISSISSIPPI

February 1965

Dear Doctor:

AMA's House of Delegates meets at Chicago in special session February 6-7 on urgent issue of health care for the aging. Expected emphasis will be placed on new AMA program of care for all over 65 on basis of need - not as a matter of right under Social Security.

> Heart of AMA proposal is sponsorship by Blue plans and voluntary insurance with nonfederal administration. Also advocated is removal of Kerr-Mills administration from welfare departments and placing it under state health departments or medical-oriented groups.

The U.S. Senate confirmed John T. Connor, once a registered Republican, as the new Secretary of Commerce. Connor, one time president of a major pharmaceutical firm, still holds his stock in company but has placed it in trust. He told senate commerce committee that he regards drug patents as "life blood of the industry."

More disquieting reports on abuse of hallucinogenic agents are turning up in both the popular and scientific presses. One researcher has called for controls on sales of morning glory seeds which, when ingested, are said to produce a psychic reaction similar to LSD. AMA reports that peyote and mescaline can be purchased from mail order houses.

Inadequacy of physical activity facilities for women has been called "an anachronism in an era when exercise benefits are well substantiated." This observation came from AMA's Committee on Medical Aspects of Sports who contend that American women lack opportunity to avail themselves to the same wholesome, beneficial physical activities as are available to men.

First and only paramedical group to support medicine in fedicare fight thus far is American Association of Medical Assistants. Meeting recently at Oklahoma City, AAMA pledged all-out help legislatively. Organization is made up of doctors' aides, and unit has been formed in Mississippi.

Sincerely,

Rowland B. Kennedy
Executive Secretary

DATELINE - MEDICAL AMERICA

Louisiana Attorney General Clarifies PKU Law

New Orleans - A Louisiana physician's responsibility under the state's new phenylketonuria test law for the newborn ends with his notifying the parents in writing of the requirement to be accomplished during the first four weeks of life. Difficulty was that legislature failed to spell out legal definition of "newborn period," but attorney general ruled that usually accepted medical definition satisfies law.

'Rheumatoid Arthritis' Research Trust Is Held Valid

Sacramento - A California appellate court has held that the provisions of the McKenzie trust, the benefits of which will someday be paid to the individual who finds "the cause and cure for rheumatoid arthritis to the satisfaction of the regents of the University of California," are lawful and valid. The state contended that trust wasn't entitled to status of a charitable, tax-exempt entity, since possibly only one person would profit. Courts took view that "the public would be the true beneficiary" and that trust would stimulate research.

NASA Releases Data On Medically-Adaptable Instruments

Houston - The National Aeronautics and Space Administration has released technical briefs on instruments developed for manned space flights which have clinical and medical research applications. The pneumotachometer (Tech Brief 64-10259) measures respiration rates per minute on breath-to-breath basis, while the digital cardiometer (Tech Brief 64-10258) computes heartbeat rate from EKG waveform output, visually displaying data in beats per minute. Briefs are available to physicians who write NASA, Houston, Texas 77001.

Auto Death Forecast Is Gloomy For Young Adults

New York - Metropolitan Life statisticians say that auto fatalities are higher at ages 15-24 than any other decade of life - and getting worse. Forecast for 1965 is 12,150 such young adults killed, and even if tragic rate of 40 per 100,000 stays constant, death toll will zoom to 14,450 by 1970 on population increase. Auto accident fatalities account for two out of five deaths in this age group.

VA Will Close 14 Hospitals

Washington - The Administrator of the Veterans Administration announced that 14 of the agency's 170 hospitals, containing 6,000 of its 120,000 beds, will be closed by June 30. Located for the most part in the east and midwest, the facilities include 3,000 domiciliary and tuberculosis beds. Only one, the Thomasville, Ga., hospital, is in the south.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
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ORIGINAL PAPERS

Facial Pain

E. C. SCHULTZ, M.D.
Memphis, Tennessee

FOR MANY YEARS, the subject of facial pain has been of great interest to me. Because numerous structures of the head and neck are capable of producing such discomfort, facial pain comes to the attention of and is treated by various practitioners of the medical and dental profession. Evaluation in the treatment of facial pain has been retarded mainly by lack of understanding of the causes of pain; and, therefore, specific therapy, either medical or surgical, directed toward its control has been lacking.

Suffice it to say, all of us have seen many cases of Costen's syndrome (temporomandibular joint syndrome), carotidynia, and geniculate neuralgia (to name a few) that do not respond to any therapy directed to the specifically involved structure, and symptomatic relief is obtained only by utilization of nonspecific pain control procedures on the central nervous system, such as electroshock or prefrontal leukotomy. Though it is presumptuous to generalize, I feel we have learned over the years that burning pain of the face responds to virtually no single or specific therapy directed toward the painful area. Pain control is usually incomplete, and successful methods used for one patient may be woefully lacking for another. But learning even in defeat has its merits, for it is only by constant search, experimentation, and formulation of new theories that progress will be made toward a better understanding of pain and its control. Perhaps in the not too distant future, through the development of research, pain as an entity may be mastered and controlled.

Three causes of facial pain are commonly encountered in the practice of neurologic surgery.

Because numerous structures of the head and neck are capable of producing such discomfort, facial pain comes to the attention of various practitioners of the medical and dental profession. The author discusses in detail three causes of facial pain that are commonly encountered in the practice of neurologic surgery: tic douloureux, aneurysms of the intracranial carotid artery, and cervical osteoarthropathy. He considers etiology, diagnosis, and treatment.

I am certain all of you at one time or another have dealt with one of these problems. It is not possible to discuss the numerous causes of facial pain, and I have, therefore, selected these for their current interest and known therapy.

TIC DOULOUREUX

Tic douloureux or trigeminal neuralgia was described as early as the first century A.D. in the writings of Aretaeus and has continued to occupy the attention of physicians. Trigeminal neuralgia plagued man for a long period before it was recog-

From the Department of Neurological Surgery, University of Tennessee.
Read before the Section on Eye, Ear, Nose, and Throat, 96th Annual Session, Mississippi State Medical Association, Jackson, May 11-14, 1964.

nized as a clinical entity. The first detailed description of the disease in 1677 is credited to John Locke, English physician, philosopher, and author of the constitution of the State of Carolina. The recognition of tic douloureux as a clinical entity is usually credited to Nicolaus André in 1756. John Fothergill (1773), apparently unaware of this, reported 14 cases of painful affections of the face with such clarity and detail as to suffice today.

Tic douloureux manifests itself by the sudden occurrence of severe, lancinating, momentary facial pain over the distribution of the fifth nerve. It is a disease of middle and old age, and when I encounter it in patients less than 40 years old, I suspect the patient may have multiple sclerosis. I must admit, however, I have seen but two such occurrences. Tic douloureux is more common in the female. Pain most often involves the second and third—the maxillary and mandibular—portions of the nerve and much less commonly the first or ophthalmic portion. It frequently involves two adjacent divisions such as the second and third or first and second. Usually, trigger areas are found in the distribution of one nerve that on stimulation initiates the painful paroxysm.

Dr. R. Eustace Semmes, our senior and esteemed associate, who has observed and operated upon more patients with tic douloureux than any previous neurosurgeon, adds these remarks: "Tic douloureux is a condition about which more positive statements can be made than about any other condition with which I am familiar. No one knows the cause. There is no worse pain. It does not kill. There is never any sensory loss, swelling, or redness. It can always be relieved by interrupting the pathway. There is no demonstrable pathology with the exception of slowed nerve conduction. The pain is always anatomic, and its nature, invariable. The diagnosis is practically never in doubt. The patients are always grateful for relief; they always pay."

Usually, the patient will enter the office with an expressionless face, unwashed or unshaven on the affected side. Speech is cautious, with barely perceptible lip movements. He will not permit you to touch his face. Frequently, food and water have not been taken for days because of the lightning-like flashes of pain, which become worse as time goes on. Remissions are common and often prolonged for years. The pain is always momentary, the characteristic flashes being brought on by touching or movement such as chewing, talking, brushing the teeth or even a breeze striking the face. At rest, the patient is usually comfortable save for the fear of the next pain. When pain begins in a tooth or gum, one or more teeth are usually extracted, and subsequent pain is blamed upon the dentist.

Since the patient avoids talking, it is often necessary to relate his symptoms to him, to which recital he can nod agreement. The patient is not interested in the risks of treatment but only the prompt and complete relief of the intense suffering. Usually, vitamin B_{12}, Dilantin, iron salts, Trilene, and many other remedies have been tried, none of which have given lasting relief except when started in the beginning of a remission.

TREATMENT

Our plan of treatment is to give the longest period of relief, with the least possible sensory loss and risk to the patient. If he is seen during a pain-free interval or the pains are infrequent, mere reassurance that he can be completely relieved is all that is necessary. If seen during an attack, a novocain block of the supra-orbital, intra-orbital or mental nerve will often relieve the pain. This may be followed by the injection of 1 cc. of 95 per cent alcohol in or about the foramina of these nerves to achieve anesthesia and pain relief usually lasting for 7 to 18 months. The entire mandibular branch may be blocked at the foramen ovale where pain involves the tongue and the floor of the mouth. The maxillary division is rarely injected because of the hazard of the extraocular nerve palsies. These procedures are carried out in the office.

Where a more lasting anesthesia is desired or where the presence of scar tissue from previous alcohol injections makes subsequent injections less effective, surgical avulsion of the involved nerve is carried out. These are frequently done as outpatient procedures. Occasionally, avulsion of the inferior alveolar nerve by exposing it at the angle of the mandible is desirable.

These methods are employed chiefly in the feeble, poor-operative-risk patients or those desiring to avoid major surgery. The treatment has much merit. It acquaints the patient with what can be done and the anesthesia resulting, and it subjects him to virtually no disability and little expense. Regrowth of the nerves occurs, and when sensation returns, so does the pain, in most instances. It is for these patients and the younger age groups that the intracranial procedures are advised.

The intracranial procedure is similar to that developed by Frazier. Local anesthesia is employed. Through a 4-centimeter craniectomy re-

moving the temporal squama, the dura is elevated from the floor of the middle fossa, exposing the middle meningeal artery, which is cauterized and divided, and the foramen spinosum is plugged with waxed cotton or applicator stick. The dura is then stripped from Meckel's ganglion, exposing the dura propria and the posterior root. To avoid traction on the greater superficial petrosal nerve, the dura is not completely separated from the petrous ridge. If desired, this nerve may be identified by stimulation, then sectioned, to permit wider exposure. The dura propria is opened by sharp dissection, and the nerve filaments of the second and third divisions come into view, permitting a differential section of the posterior root. Few or all of the fibers of the posterior root, depending upon the patient's requirements, may be divided. Wherever possible, cutting the ophthalmic fibers is avoided, to prevent an anesthetic globe. Should this be necessary, meticulous postoperative care and protection of the eye are necessary. Bleeding is rarely a problem. It is usually my practice to place a small piece of gelfoam over the ganglion and close the temporal muscle, fascia, subcutaneous tissue, and skin with interrupted silk sutures. The patient is usually able to take oral fluids the day of surgery and is out of bed on the first postoperative day, if he desires.

Complications are fortunately rare but merit explanation. In over 2,000 intracranial procedures done by us, there has been but one death from cerebral thrombosis, this being in an elderly female. Facial paralysis may be noted immediately after surgery, and this is thought to be due to traction on the greater superficial petrosal nerve. However, my otologic confreres have demonstrated to me at surgery the geniculate ganglion lying uncovered by bone on the petrous ridge. In such instances, trauma to it is unavoidable.

It has been my feeling that some injury to the facial nerve may result from the type of retractor used in the temporal wound, which causes traction on the nerve filaments. In such instances, the paralysis is noted immediately after surgery. Delayed onset of facial paralysis is more likely to come to your attention. This usually has its onset several days after operation. The patient complains of stuffiness of the ear. On examination, blood can be seen back of the tympanic membrane. Blood has entered the middle ear through one of the zygomatic air cells or an opening in the petrous ridge. No treatment is required for the facial paresis unless corneal sensation is impaired or ectropion is present, at which time tarsorrhaphy is advisable, to prevent corneal ulceration. Fortunately, facial paresis is not common, and permanent paralysis is rare.

Paralysis of the muscles of mastication from injury to the motor root cannot always be avoided, despite meticulous dissection. (Personally, I consider sparing the motor root a challenge, and, when I fail to do this, regard myself as inept.) However, this motor loss is well compensated and rarely commented upon by the patient. Its extreme importance is in the small group of patients destined to have bilateral tic douloureux.

Otorrhea is a rare complication due to escape of cerebrospinal fluid into the middle ear from openings into the zygomatic air cells. I have personally never had to repair such a fistula. Other complications, such as hemorrhage and infection, are so infrequent they need merely to be mentioned.

For the past 10 years, we have offered the decompression-compression operation as described by Taarnhøj. The ganglion and posterior root are exposed, the dura propria is opened, and the posterior root is firmly compressed for one minute by a blunt metal dissector. Much of the sensation of the face is spared, and the procedure is more apt to be selected by younger individuals, especially women. Should the pain return, root section can be carried out with assurance of relief.

Root section through the posterior fossa, as developed by Dandy, is reserved for treatment of pain from malignancies and rarely employed in tic patients unless the temporal approach is denied us by other existing pathology. Complications from posterior fossa surgery are apt to be major ones, while those from middle fossa surgery are minor.

ANEURYSMS OF THE INTRACRANIAL CAROTID ARTERY

Since 1940, carotid arteriography has become the singular most common diagnostic procedure employed by us. Well over 1,000 are done yearly for the study of pain problems, vascular insufficiency, and intracranial hemorrhage. It soon became apparent that some individuals with facial pain were actually suffering from arteriosclerotic dilatation of the carotid artery in the cavernous sinus or a large congenital aneurysm compressing one or more branches of the fifth nerve. While it is true the facial pain in these patients is usually constant and often extraocular palsies or sensory disturbances are associated, sharp, intermittent pain of the face, particularly of the eye, is not uncommon.

Of great interest to me was the elderly mother of one of our physicians. She complained of inter-

mittent, stabbing pain of the right eye, which seemed to be synchronous with her heart beat. Because the pain was not constant, tic douloureux involving the ophthalmic division of the fifth nerve was suggested. Carotid arteriography was performed, and a large arteriosclerotic aneurysmal dilatation of the cavernous carotid artery was demonstrated. Despite her advanced age, ligation of the internal carotid artery in the neck was accomplished without difficulty, and her pain ceased. In certain instances, intracranial clipping of an aneurysm may be necessary.

We believe carotid arteriography to be a useful tool in the study of many problems of facial pain and employ it in all patients where the cause of the pain is uncertain.

CERVICAL OSTEOARTHROPATHY

In 1950, in a paper given before the American Laryngological, Rhinological and Otological Society, we called attention to cervical disk degeneration and protrusion as a cause of facial pain. At times, the pain may have tic-like characteristics. This is particularly true in these individuals relating pain to certain positions of the head. In one such case, the patient related the onset of his daily unilateral eye pain to reading the nightly newspaper. His habit was to sit in a low chair and tilt his head to the right, following which he would soon experience severe right eye pain lasting for hours and requiring opiates for relief. The position of acute flexion of the neck after a short period of time precipitated the onset of pain. The examiner could reproduce the pain at will. Traction on the neck relieved the discomfort.

Patients suffering from facial pain due to cervical osteoarthropathy usually present few findings on examination. They may have experienced episodes of neck or shoulder pain, or even episodes of occipital headache in the past, associated with neck stiffness. Examination is normal except for loss of the normal cervical lordotic curve, cervical muscle spasm, restriction of cervical motion, and tenderness on pressure over one or more of the spinous processes. Tenderness over the occipital, supra-orbital, and infra-orbital nerves are common findings. The patient's pain may be reproduced.

Why facial pain may be produced from cervical pathology is actually unknown. It is known that anatomically the dorsal horn of the upper cervical nerve roots—the substantia gelatinosa of Rolando —merges imperceptibly with the spinal tract of the trigeminal nerve. Thus, noxious impulses entering the upper cervical nerves may be referred over the distribution of the fifth nerve to produce facial pain.

Treatment is largely directed toward mechanically diminishing or preventing nerve compression. In the milder cases, merely cautioning patients against rapid or exaggerated head motions, the omission of a pillow during sleep, and the use of heat in the form of a hot water bottle beneath the neck are all that is necessary. For those with severe pain, cervical traction usually affords satisfactory relief. It is perhaps best to hospitalize these patients for several days to teach them the proper use of cervical traction. Five pounds of halter traction used intermittently for several hours are employed. Proper use of traction can then be continued at home.

The use of 2 per cent novocain or metycaine solution injected in the region of the occipital, supra-orbital, and infra-orbital nerves often produces dramatic relief of pain. Rhizotomy is rarely employed in these patients.

SUMMARY

Three frequent causes of facial pain encountered in neurosurgical practice have been presented. Though causation may differ, the pain pattern is often identical. Meticulous study of these patients will, in most instances, lead to the solution of the pain and gratifying relief. ★★★

20 S. Dudley St.

FERTILITY PROBLEM

The lecturer was hammering home a point on the population explosion. "Every four seconds," he asserted, "a woman gives birth to a baby."

Exclaimed a voice from the rear of the hall: "Then our problem is to find that woman and stop her!"

The Primary Malabsorption Syndrome

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Jackson, Mississippi

A host of pathologic states are capable of deleteriously affecting the small bowel. In this paper, the author considers the primary malabsorption syndrome, also referred to as idiopathic steatorrhea, celiac disease, nontropical sprue, or gluten-induced enteropathy. He discusses etiology, pathophysiology, symptomatology, recognition, and management.

THE SMALL INTESTINE is the organ of digestion and absorption. The stomach plays a minor role in the digestive process, limited primarily to proteins, but does serve the vital function of tritiation, acidification, and chymefaction, acting as a storage hopper to discharge bit-by-bit the chyme into the small bowel. In this latter locus, the prepared material is mixed with bile, the succus entericus, and, most importantly, the exocrine pancreatic secretion. The enzymatic action of these juices allows intraluminal digestion to take place. Starches are converted to simple sugars, fats are at least partially split to fatty acids and glycerol, and proteins are broken down to simple polypeptides and amino acids. These simple forms are then absorbed by the intestinal mucosa. Further digestion takes place within the mucosa itself by means of numerous intracellular enzymes before the end products are transported into the portal system and lymphatics for presentation to the metabolic factory of the liver.

In view of the vital role played by the small intestine, it is apparent that diseases affecting this organ directly or indirectly can materially impair digestive and/or absorptive processes. When such an occurrence takes place, the resultant is a loss to the organism of ingested nutrients via the feces. The clinical state accompanying this dysfunction is termed the malabsorption syndrome.

It is readily apparent that a host of pathologic states are capable of deleteriously affecting the small bowel. A discussion of the entire problem of small bowel disease is beyond the scope of this presentation. Table I provides an outline of the various situations capable of presenting as a malabsorption syndrome, with examples of each, and gives some idea of the potential complexity of differential diagnosis involving any given case.

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Read before the Section on Medicine, 96th Annual Session, Mississippi State Medical Association, Jackson, May 11-14, 1964.

This discussion is concerned with the primary malabsorption syndrome, also referred to as idiopathic steatorrhea, celiac disease, nontropical sprue, or gluten-induced enteropathy. The latter

TABLE I

CLASSIFICATION

A. Primary malabsorption syndrome
 1. Tropical sprue (folic acid deficiency? rancid fats? infection?)
 2. Gluten induced enteropathy
 a. Celiac disease
 b. Nontropical sprue

B. Secondary malabsorption syndrome
 1. Due to primary small bowel disease (regional enteritis, scleroderma, amyloidosis)
 2. Due to lymphatic blockage (lymphoma, Whipple's disease)
 3. Due to altered bacterial flora (strictures, blind loop syndrome, enteric diverticulitis)
 4. Due to altered gastrointestinal continuity (postgastrectomy syndrome, gastrojejunocolic fistula, intestinal short-circuiting)
 5. Due to parasitic infestations (giardiasis, diphyllobothrium latum, Balantidium coli)
 6. Due to inadequate digestive enzymes
 a. Pancreatic (cystic fibrosis, chronic pancreatitis, carcinoma)
 b. Biliary (obstructive jaundice, biliary fistula)
 7. Due to metabolic diseases (hyperthyroidism)
 8. Drug induced (neomycin)
 9. Congenital enzyme deficiency (lactase deficiency, giving primary lactose intolerance)

term is more accurate and explicit and is therefore the one to be preferred.

GLUTEN INTOLERANCE

Gluten is a protein moiety found in wheat, rye, and barley primarily. On electrophoresis nine separable proteins can be identified. Gluten can be split into glutenin which is not toxic, and to an alcohol soluble portion, gliadin, which contains the toxic principle. Gliadin is known to contain eight polypeptides. The substance can be rendered harmless by acid hydrolysis as well as deamidation, whereas tryptic and peptic digests are harmful; further digestion with hog intestine mucosal extracts or papain renders these digests harmless. Although the specific toxic peptide and its amino acid sequence have not yet been identified, it is known that these substances are of low molecular weight, that they contain six to eight amino acids and contain proline and glutamine. It has been shown that gliadin feedings to celiacs is followed by increased serum glutamine levels; this does not take place in normal persons. There is some suggestive evidence that in gluten enteropathy the presence of gliadin permits these polypeptides to cross the mucosal barrier and enter the blood stream, impairing cellular metabolism as well as exerting harmful peripheral effects. It has also been shown that gluten inhibits the formation and release of acetylcholine by the intestine.[1, 2, 9]

Patients with the primary malabsorption syndrome are uniformly intolerant to gluten. With removal of gluten from the diet, clinical improvement occurs; resumption of gluten ingestion produces a recrudescence of symptoms. Instillation of gluten solutions into uninvolved segments of ileum causes no change in normal individuals, but induces characteristic pathologic alterations in patients with this syndrome. Whether the intolerance is present from birth, as in celiacs, or whether it is an acquired abnormality of later life is a moot question at present. Current thinking favors the former premise.[3, 4]

Studies have accumulated implicating an allergy to gluten in the syndrome. The presence of gluten antibodies, the beneficial response to steroids, the presence of plasma cells in biopsy material, and the occasional appearance of "gluten shock" in celiacs all point to a sensitivity phenomenon. The preponderance of evidence implicates a more systemic nature of the disease, however, with the sensitivity phenomenon representing secondary dysfunctions.[1, 5]

CLINICAL FEATURES

The clinical features of malabsorption consist of diarrhea, flatulence, weight loss, multiple vitamin deficiencies, peripheral edema, and occasionally tetany. The stools are typically clay-colored or yellowish, mushy, bulky, foamy, and foul, and come most often during the morning hours. Flatulence and meteorism are common. Extreme degrees of weight loss, weakness, and cachexia may be found in advanced, untreated cases. Glossitis, cheilitis, and peripheral neuritis are common. Peripheral edema can be striking. Occasional patients develop a hemorrhagic tendency. Of interest is a reversal of the diurnal-nocturnal water balance giving these patients nocturia and providing a false positive Kepler-Power-Wilder water test due to delayed absorption from the intestine.[6, 7, 8]

The characteristic appearance of the stool is due to steatorrhea, an excess of fecal fat. One should realize that large amounts of protein may be lost in the feces as well. It is not uncommon for steatorrhea to be present in the absence of a diarrhea and be detectable accurately only by metabolic balance studies.

Patients having less marked malabsorption may impress the casual examiner as instances of an irritable colon syndrome or neurasthenia. Unless the history is meticulously taken and a full assessment of the status is obtained, the diagnosis may be entirely missed in these milder cases.

In order to understand more fully the nature of gluten enteropathy, it is now necessary to consider briefly the microscopic and submicroscopic make-up of the small intestinal mucosa. To enlarge its absorbing surface the small bowel is studded with myriads of villi lined by mucosal cells; between the villi lie crypts which dip down almost to the muscularis mucosae. The mucosal cells are formed deep in the crypts and migrate up the wall of the crypt, emerging onto the finger-like villi, traveling up to the tip from thence they are extruded. Turnover from genesis to extrusion takes about two and one-half days. About half way up the crypt the mucosal cells begin a "maturation" process, developing a host of intracellular enzymes, particularly succinic dehydrogenase, various esterases, adenosine triphosphatase, alkaline phosphatase, and acid phosphatase. The development of the maturing process has been documented by histochemical studies as well as by demonstration of ribosomes and mitochondrial formation by electron microscopy. The luminal

extremity of each mucosal cell is capped by large numbers of microvilli which further add to the absorptive area and absorptive ability.[10, 11]

PATHOLOGIC CHANGES

Characteristic pathologic changes have been found in gluten induced enteropathy, primarily as the result of the small bowel biopsy being developed as a practical investigative tool. These include: (1) deepening of the crypts, (2) increased mitosis in the base of the crypts, (3) failure of the migrating cells to "mature" properly with the resulting lack of numerous intracellular enzymes (succinic dehydrogenase, esterase, and adenosine triphosphatase, acid phosphatase), (4) fusion, blunting, and flattening of the villi, (5) fragmentation and loss of microvilli, (6) increased cell degeneration and cell loss from the lumenal surface, (7) round cell infiltration throughout the mucosa and submucosa. The earliest pathologic changes noted from induced gluten injury in celiacs are seen at the tips of the villi. With such pathologic changes there is a great diminution in absorptive surface; coupled with the intracellular enzymatic deficiencies, the net effect is an impairment of absorption and final intracellular digestion. Additionally, the damaged mucosa allows toxic materials to cross the barrier, gain egress to the circulation, and exert harmful peripheral effects. With proper therapy (primarily a gluten-free diet), there is a gradual return toward normal over a period of weeks. However, it seems doubtful that complete and total microscopic or functional recovery takes place in all patients, for reasons that are still obscure.[4, 10, 11]

The pathologic changes described are diagnostic of gluten enteropathy. Other diseases may mimic this condition but do not fulfill all of the criteria listed. Small bowel biopsy, therefore, is of great value in establishing the proper diagnosis.

PATHO-PHYSIOLOGY

The patho-physiology of gluten enteropathy is more complex than might be appreciated on casual thought. It should be realized that intraluminal digestive processes are totally normal in this disease. Although the failure of absorption leads to a loss of fats, proteins, vitamins, and other nutrients via the fecal route, further more profound yet subtle factors are involved. It is now well-known that there is an actual exudation of fat and protein from the wall of the gut into the lumen in this disease, which is corrected to a considerable degree by a gluten-free diet. This phenomenon contributes greatly to the malabsorption problem. With the loss of nutrients, vitamin malabsorption also takes place, with the inevitable appearance of multiple vitamin deficiencies. These various factors lead to diarrhea, weight loss, malnutrition, hypoproteinemia, and peripheral edema. Atrophy of the gastric mucosa, with hypo- or achlorhydria, may follow.[12, 13, 14]

Calcium metabolism is adversely affected. Calcium is lost in the stool, being bound to the fatty acids in the form of soaps. In addition, exogenous calcium as well as endogenously secreted calcium contained in the various digestive fluids are poorly absorbed. Vitamin D deficiency commonly exists. These factors culminate in a marked increase in fecal calcium, hypocalcemia, tetany, compensatory hyperparathyroidism and osteomalacia. Other mineral deficiencies are also noted, particularly hypokalemia and hypomagnesemia.[7, 16, 17]

One interesting and as yet poorly understood phenomenon is that of abnormal indol metabolism. This is manifest by increased levels of serum serotonin and urinary 5-Hydroxy-indolacetic-acid during exacerbations of the disease state. These values do not approach those seen in a malignant carcinoid syndrome. These values revert to a normal level on a gluten-free diet. It is possible that the disturbances are related to an alteration in tryptophan metabolism resulting from a deficiency of pyridoxine.[15]

An altered intestinal bacterial flora which occasionally develops during the course of the illness is a further source of dysfunction, inducing additional vitamin deficiency and additional malabsorption of nutrients, macrocytic anemia (due to B-12 malabsorption), as well as further derangements in indol metabolism. Antibiotic therapy restores these abnormalities to normal.[7, 15]

DIAGNOSTIC STUDIES

A host of diagnostic studies are available to the clinician. A partial list containing the more useful tests is shown in Table II. Time does not permit a discussion of these tests. From a practical point of view one should emphasize the value of an awareness of the disease, the small bowel x-ray series (employing flocculable barium), the 25 gram xylose tolerance test, and the small bowel biopsy.

As one would already have surmised, the prime requisite of adequate therapy is the permanent imposition of the gluten-free diet. This single factor suffices in the majority of patients.[6, 18, 19] It

is occasionally necessary to give steroids in conjunction with the diet although this is distinctly uncommon.[20]

There is no necessity in placing the patient on a low-fat diet as long as the gluten-free diet is prescribed. Folic acid, Vitamin B-12, and multiple vitamin supplements are useful adjuncts but are unnecessary, although commonly prescribed. Hydrochloric acid is valueless. Anticholinergic agents are useless. Supplementary calcium may be of some temporary assistance in the presence of latent or overt tetany. Pancreatic extracts, bile salts, and digestive enzymes have no therapeutic effect.[7]

Given a patient who has followed the diet strictly and has not been clinically controlled, one should consider the probability of a concomitant alteration in the bacterial flora of the small intestine. Antibiotic therapy (preferably tetracycline) in courses of 14 to 28 days will provide dramatically beneficial results in such instances.[4, 7, 9]

It is important that the patient and the physician understand that the gluten intolerance is a permanent fixture. In the absence of gluten all clinical facets of the syndrome usually disappear without any other therapeutic requisite, although complete biochemical recovery does not take place. With re-exposure to gluten the clinical picture reactivates with distressing rapidity and regularity.

Adherence to the gluten-free diet is the sine qua non of successful therapeusis. ★★★

746 Manship St.

TABLE II

METHODS OF INVESTIGATION

A. Screening
 1. Suspicion on clinical basis
 2. Stool (increased fat)
 3. 5 hour, 25 gm. xylose tolerance test (less than 5.5 gm. in 5 hour urine)
 4. 5 HIAA in urine (moderate increase)

B. Ancillary
 1. Radioactive Triolein-oleic acid (low uptake of both substances)
 2. Schilling test (low uptake, even with intrinsic factor)
 3. Metabolic balance studies (steatorrhea)
 4. Vitamin A tolerance test (flat)
 5. Glucose tolerance test (flat)
 6. Water loading test (delayed water excretion)
 7. Calcium (low)
 8. Proteins (low, especially albumin)
 9. Gastric analysis (hypo- or achlorhydria)
 10. Blood count (anemia, often macrocytic)
 11. Gliadin antibodies (?)
 12. Prothrombin time (increased)

C. Diagnostic
 1. Small biopsy series (malabsorption pattern, regional enteritis, enteric diverticulosis, lymphoma)
 2. Small bowel biopsy (primary malabsorption, amyloidosis, Whipple's disease)
 3. Lymph node biopsy (amyloid, Whipple's disease)
 4. Rectal biopsy (amyloid, cystic fibrosis)
 5. Stools for parasites
 6. Secretin-pancreozymin test (pancreatic disease)
 7. Therapeutic trial
 8. Laparotomy—if all else fails

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MANPOWER WASTE

When the office efficiency expert died, six of his employees were asked to serve as pallbearers. That night, one dreamed that as they carried the casket down the aisle, the deceased suddenly sat up. When the man related his dream to the others the next day, one asked, "Did he say anything?"

"He sure did," exclaimed the dreamer. "He said that if we'd put rollers on the casket, he could have fired five men!"

Recurrent Pterygium: Use of Topical Triethylene Thiophosphoramide

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DESPITE THE VAST LITERATURE on the subject of pterygium and the numerous operative techniques advocated by various authors, the problem of the recurrent pterygium remains with us. Beta radiation can be of great help in difficult cases, but is expensive and not without hazard due to the danger of cataract formation.

The authors report the use of topical triethylene thiophosphoramide in seven primary cases of pterygium and in seven recurrent cases. They observe that the results were encouraging, but not completely successful. The process of pterygium recurrence and treatment is discussed and the literature is reviewed.

METHODS AND MATERIALS

Our interest in the use of topical radiomimetic drugs began with Meacham's[1] article in November 1962 on the use of Thio-Tepa in the prevention of pterygium recurrence. The pharmacological properties and basis for clinical use are well outlined in his article. It would seem that it acts favorably on the cornea and sclera by the inhibition of new blood vessel growth in the subconjunctival space. We have used the drug postoperatively on seven primary cases (first operation) and seven cases of recurrent pterygium with encouraging results. Seven cases have been treated following the primary operation. The drug was used only if, on the second day or later, there was evidence of excess vascularization at the corneal margin. We have been impressed by the disappearance of these vessels when Thio-Tepa is used. In this group there has been only one recurrence, and this was in a garment plant worker who did not use the drug regularly.

In the group of seven recurrent cases, results were good in five, fair in one, and a failure (recurrence) in one. Again this patient was a young woman working in a shoe plant who could not use the drops regularly. Our operative procedure was either a McReynolds transplant (above or below) or some type of excision, trying always to leave a 2 or 3 mm. wide area of bare sclera. If conjunctival blood vessels can be prevented from entering the bare area near the sclera during the first six weeks postoperatively, a cure of the pterygium is likely to result in our opinion. Figure 1 shows such an eye six weeks postoperatively.

Thio-Tepa instillations were usually begun on the third postoperative day and continued for three to six weeks. The usual strength was 1-2000 (15 mg. Thio-Tepa dissolved in 30 ml. of Ringer's solution) instilling two drops every two or three

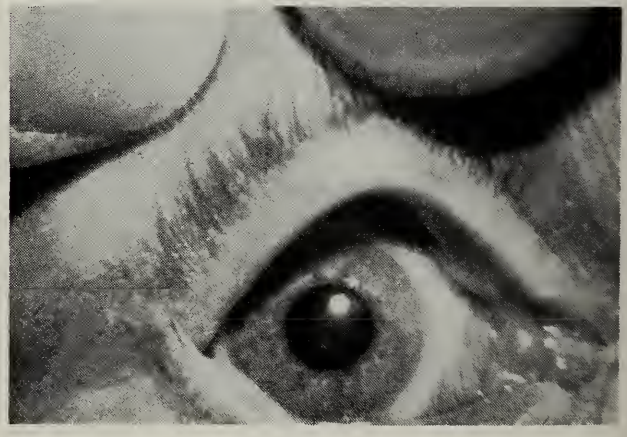


Figure 1

Thio-Tepa® is a trademark of Lederle Laboratories, Pearl River, N. Y.

hours except when asleep. Meacham has used the drug in stronger concentration (1-500), and we feel that the 1-2000 solution may be too weak to accomplish its purpose. The solution caused little stinging or irritation when instilled. Two patients developed a definite allergy to the drug after five weeks or more of use. No systemic effects were noted, and actually none were expected in view of the slight amount of the drug which can be absorbed into the blood stream when used in this manner.

We realize that the number of cases reported is statistically insignificant. However, in following these patients carefully with repeated slit lamp examinations during the postoperative period, we have been impressed by the excellent manner in which healing occurs.

CASE 1

Mrs. E.J., a 60-year-old white woman, reported recent reddening and enlargement of a "spot" present on left eye for 20 years (Figure 2). On



Figure 2

Aug. 16, 1963, a McReynolds transplant was done, transplanting the head downward. On Aug. 20, 1963, the epithelium had healed over, but



Figure 3

it was noted that the bare area was much more vascular than usual. Thio-Tepa was begun and continued for six weeks. The bare area began to whiten considerably in one week's time. Ap-

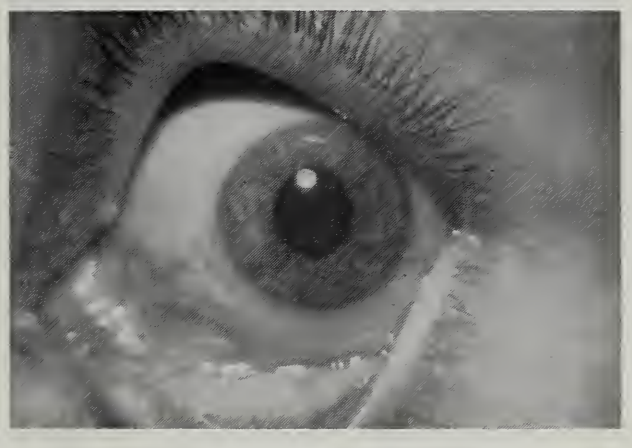


Figure 4

pearance on Oct. 26, 1963 (two and one-half months postoperatively), is shown in Figure 3. Appearance on April 11, 1964 (eight months postoperatively) is shown in Figure 4.

CASE 2

Mrs. C.C., a 40-year-old white female, was seen June 4, 1963, with a growth on her left eye. She had been informed by a physician that it was a cancer. We did not think so. On June 5, 1963, the lesion was excised by the Hughes technique, leaving 3 mm. of bare sclera. The pathologist reported tissue consistent with pterygium. One month later a recurrence was evident. Figure 5 shows the appearance on Jan. 4, 1964 (seven months postoperatively).

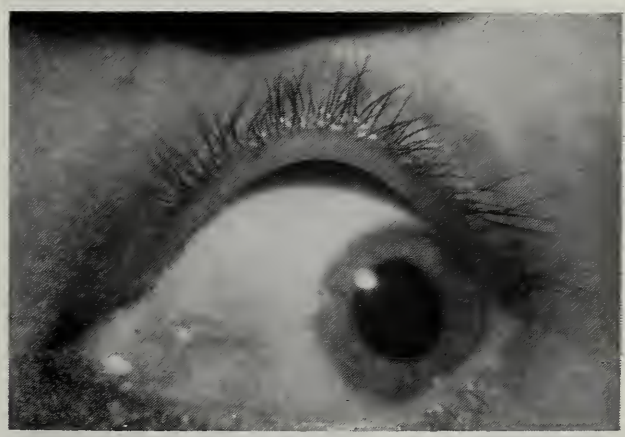


Figure 5

On Jan. 17, 1964, the head was transplanted upward and vessels in the bare area carefully cauterized. Thio-Tepa 1-2000 was begun topically



Figure 6

on the following day. Figure 6 shows the appearance one week postoperatively. Thio-Tepa was discontinued after five weeks due to an allergic reaction as shown in Figure 7. Three months post-

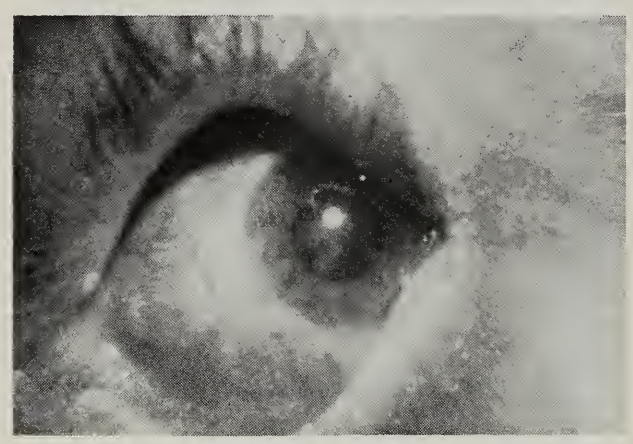


Figure 7

operatively (Figure 8) the eye was white and well healed. Close slit-lamp study revealed no vessels encroaching on the cornea.



Figure 8

W.B., a 37-year-old white male, truck driver, had a primary operation for left pterygium in August 1962. He promptly developed recurrence and was first seen by us on Nov. 19, 1962. At his second operation on Nov. 23, 1962, the head was transplanted up, limbus was grooved, and all vessels carefully cauterized. The pterygium promptly recurred. On Jan. 28, Feb. 4 and Feb. 11, 1963, he was given a total of 3900 units of beta radiation. Despite this, the pterygium began to encroach on the pupil again and a third operation was done on May 27, 1963. Two months later recurrence was obvious and by October (Figure 9) the vessels were growing rapidly.



Figure 9

Following the fourth operation on Nov. 15, 1963, Thio-Tepa 1-2000 was used topically for six weeks. Figure 10 shows appearance three

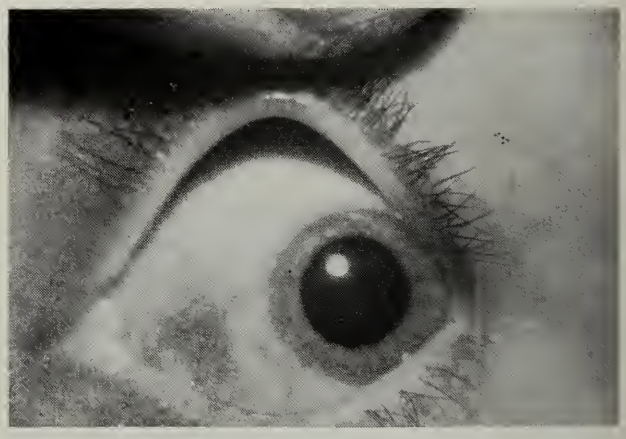


Figure 10

weeks postoperatively. Figure 11 shows the appearance of the eye as it was on Feb. 7, 1964, (three months postoperatively). Vessels were up to the limbus and a few small ones were on the cornea. There was no activity and no change in

the vessels during the past three months. We feel that he may get by without recurrence. It seemed that Thio-Tepa slowed down regrowth of blood vessels here.

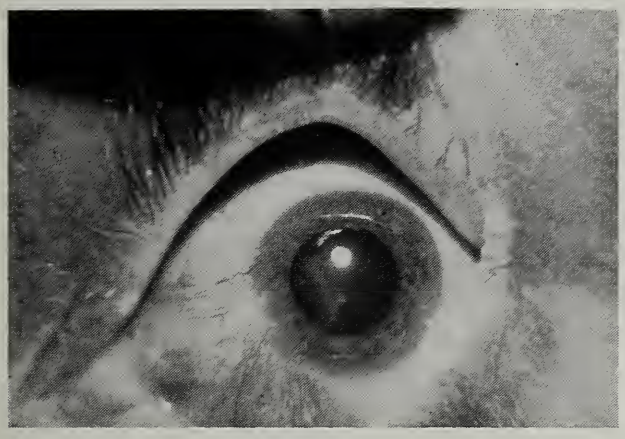


Figure 11

COMMENT

Alger[2] has recently postulated that the process of pterygium recurrence is no different from the healing of all open wounds. First, fibrin is laid down, soon changing into granulation tissue which contracts and draws the edges of the wound together. In the process of recurrence the mobile scleral conjunctiva is drawn up to the immobile cornea, as the granulation tissue contracts. It is possible that Thio-Tepa may inhibit the growth of granulation tissue as well as blood vessels, thus helping to prevent this shrinking process.

This article is not being presented as a final answer to the problem of pterygium recurrence, but is being made in an attempt to stimulate our colleagues here in the South, where pterygium is so frequent, to study and evaulate the use of antimitotic inhibitors postoperatively.

SUMMARY

Thio-Tepa was used topically, as an aid, following surgery in seven primary cases and in seven recurrent cases in an attempt to prevent pterygium recurrence. The results were encouraging, but not completely successful. The ideal strength for topical use has not been determined. ★★★

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PROFILE IN COURAGE

TV funnyman Jackie Leonard says that a couple of weeks ago he accompanied his wife to the dentist. "I want a tooth pulled," she announced, "and I don't want any anesthetic because I am in a hurry."

"That's very brave of you," observed the dentist, "which tooth is it?"

"Jack," the wife said, "open your mouth and show him the tooth."

Typhoid Fever in an Immunized Child: A Case Report

JOHN D. COFFEY, JR., M.D.
Natchez, Mississippi

This case of typhoid fever proven by positive blood culture and rising agglutination titers in a boy who had, within the month, completed a course of typhoid vaccine immunization tends to create doubt in the author's mind as to the efficacy of this immunization procedure. This doubt was supported by a report of an outbreak of typhoid fever in previously immunized military dependents.

THE VALUE OF PROPHYLACTIC injections of vaccine containing killed bacteria of the typhoid and para typhoid A and B species has been subjected to considerable doubt in recent years and with the advent of improved sanitation and improved methods of food handling and safe public water supplies there has been little opportunity for well controlled field trials of the vaccine. In 1957, Cvjetanović[1] reported a study made in an area of Yugoslavia with a high and constant typhoid morbidity rate. A control study was made to test alcohol killed and preserved and heat killed phenol preserved vaccine. Only cases of typhoid fever with positive blood cultures were used in the study. In the control group of 11,998 there were 23 cases (19.2 per 10,000), in the alcohol vaccine group of 12,017, there were 17 cases (14.1 per 10,000), and in the phenol vaccine group of 11,503, seven cases (6.1 per 10,000). The author concluded that typhoid vaccine is effective and that the phenolized vaccine is superior to the alcoholized.

Although the field trial by Cvjetanović demonstrates a statistically different incidence of typhoid fever after vaccination, the rate of typhoid fever after vaccination is still considerable.

In 1960, Black, Kunz, and Schwartz[2] reviewed some unusual aspects of salmonellosis. They raised the question for discussion as to whether immunization or improved sanitation and other control measures are responsible for the decline of typhoid fever, and commented on the equivocal results of reported field trials of typhoid immunizations. Since *Salmonella typhi* seems to be found in nature exclusively in primates, control of its spread appears to be not impracticable. Other *Salmonellae,* because of their widespread distribution among both man and lower forms of life, are not so amenable to control through sanitation and hygiene. Until the question of efficacy of immunization against typhoid has been settled, it appears to be imprudent to consider immunization against salmonellosis as a means of reducing the incidence of such infections, which are, despite the unusual and serious cases reported, for the most part self limited.

Additional evidence supporting the doubt of the efficacy of typhoid vaccine injections is provided by Edwards, *et al.*,[3] who in 1962 reported an outbreak of typhoid fever in previously immunized persons. This outbreak was traced to a common carrier who prepared food which was consumed by 408 persons in an American Youth Camp in West Germany. Sixty-two (14 per cent) of the participants of this meal developed typhoid fever. All of them with the exception of one young child had been inoculated with three injections at weekly intervals of the standard U. S. Army typhoid A and B vaccine. The older among them had also had an annual (booster) dose of this vaccine. With specific treatment none of the patients died. The child who had had no previous typhoid fever immunizations had a less severe course of illness than that of others in the series

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who had previous typhoid immunizations. In an editorial comment in the *British Medical Journal* issue of Jan. 5, 1963,[4] it is stated that beyond a doubt some individuals, despite annual reinoculations of the current vaccines, suffer attacks of typhoid and that the severity of these attacks may be as great as those occurring in persons who have never been vaccinated. One explanation offered is that the vaccines used for such patients do not contain an antigen peculiar to the strain of the invading organism. The editors conclude that though the value of typhoid vaccine is still debatable, it would be unwise to condemn it as valueless and therefore to abandon its use.

CASE REPORT

L.B., 9-year-old white male was well until April 26, 1958, when he developed an occipital headache with fever and nausea. He was seen in the clinic on April 29, 1958. At that time physical examination was negative except for slightly injected pharynx and a few posterior cervical lymph nodes which were palpable. Skin tests with old tuberculin 1-1000 and histoplasin were negative. A blood count showed a hemoglobin of 11.6 gm., WBC 7,150, with 59 segs, 41 lymphs. Symptomatic therapy was prescribed, and he returned to the clinic on May 1, 1958, with persistent fever (103°), anorexia, somnolence, irritability, and slight headache. His blood count was essentially the same, and urinalysis, including test for bile, was negative.

An x-ray film of the chest was negative; agglutination series including heterophile and tularemia were negative except for typhoid O and H which were positive 1 to 320, para B positive 1 to 640. A blood culture was drawn at this time and this was positive for *Salmonella typhi*. This was confirmed by the Louisiana State Department of Health Laboratory. On May 2, 1958, he developed diarrhea and temperature elevation to 105°. He was started on Chloramphenicol 500 mg. initially then 250 mg. every four hours. He showed a gradual defervescence, and by May 7, 1958, he was completely free of fever. The only time during his illness that any significant positive physical findings were noted was on May 5, 1958, when the spleen tip was palpated on deep inspiration.

Chloramphenicol was continued for a nine day period and there were no relapses or recurrences of fever. On May 6, 1958, his agglutination titers had risen to 1 to 2,560 for typhoid O, 1-1,280, for typhoid H, 1-1,640 for para B. This patient had completed an immunizing course of injections of typhoid vaccine given by the Louisiana State Health Department two weeks prior to the onset of his illness. This vaccine was reported to contain only typhoid bacterical antigen without para A and B.

COMMENT

Although immunization against typhoid fever continues to be advocated by many public health authorities and is, in fact, still required by many summer camps, recurrence of typhoid fever in immunized individuals fosters some doubt as to the value of this procedure. One wonders if the time and money expended on the typhoid immunizations might be more useful if directed toward the promotion of more widespread use of immunization procedures of definite proved value and to better control of pollution of our natural waterways with sewage and chemical wastes. ★★★

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IN ABSENTIA

A nurse entered the waiting room and announced, "It's a boy."

"Well, what does he want?" asked the professor as he glanced up from his book.

Radiologic Seminar XXXIV: Trichobezoar

SAM LEVI, M.D.
Pascagoula, Mississippi

A BEZOAR IS DEFINED as a concretion in the stomach or intestinal tract of animals, and represents a nonopaque foreign body formed by the accumulation of ingested materials. They have been a source of interest for centuries, and at one time were thought to possess certain magical or medicinal properties. They may be classified according to the nature of their contents.

1. Trichobezoar—hair
2. Phytobezoar—vegetable or plant products, with persimmons being the classical example
3. Trichophytobezoar—a combination of the above
4. Concretions—resin, shellac, or gums

Trichobezoars are found almost exclusively in young girls, usually suffering from a mild personality derangement. The definite diagnosis of bezoar on the basis of history and physical findings alone is unusual. The patient will rarely volunteer the information that she has been eating hair. Symptoms usually occur when the bezoar is large enough to interfere with nutrition, produce obstruction, or present a palpable mass.

Laboratory findings may include a mild leukocytosis and a slight secondary anemia, and gastric analysis usually reveals a low acidity.

The roentgenographic examination will usually reveal the correct diagnosis. At the time of fluoroscopy, the ingested barium will be seen to outline the stomach wall, leaving a radiolucent filling defect within the lumen of the stomach. As more of the barium meal passes into the stomach, the general outline of the stomach remains, but it will begin to take on a striated or mottled appearance as the barium fills the small spaces between the particles of matter making up the bezoar. In the erect position a mottled mass may protrude into the gastric air bubble above an air fluid level. A delayed roentgenogram of the abdomen, when the stomach is empty, will frequently reveal a mass in the region of the stomach which has striated or mottled appearance due to the barium within the crevices. Unless the bezoar fills the stomach, it is mobile and can be moved by palpating hand. Bezoars have to be differentiated from intrinsic polypoid neoplasm and recently ingested food. Associated gastric ulcer occurs in 24 to 77 per cent of cases, and may result in perforation and hemorrhage.

In the current case, a 15-year-old white female complained of epigastric pain for two to three weeks. There was nausea on awakening which was relieved by food. On physical examination a palpable epigastric mass with smooth margins was detected, but was thought to be liver. X-ray examination revealed a large bezoar with an ulcer on the anterior aspect of the upper body of the stomach. On direct questioning, the patient denied eating persimmons but admitted ingesting wood and hair. The day following admission the patient developed left shoulder pain. Perforation of the ulcer was suspected and at laparotomy a large trichobezoar was found and removed by gastrotomy. A perforation of the anterior wall of the fundus was noted and closed. The patient had an uneventful recovery. The bezoar measured 33.0 cm. along greater curvature and 24 cm. on lesser aspect.

Singing River Hospital

Sponsored by the Mississippi Radiological Society.

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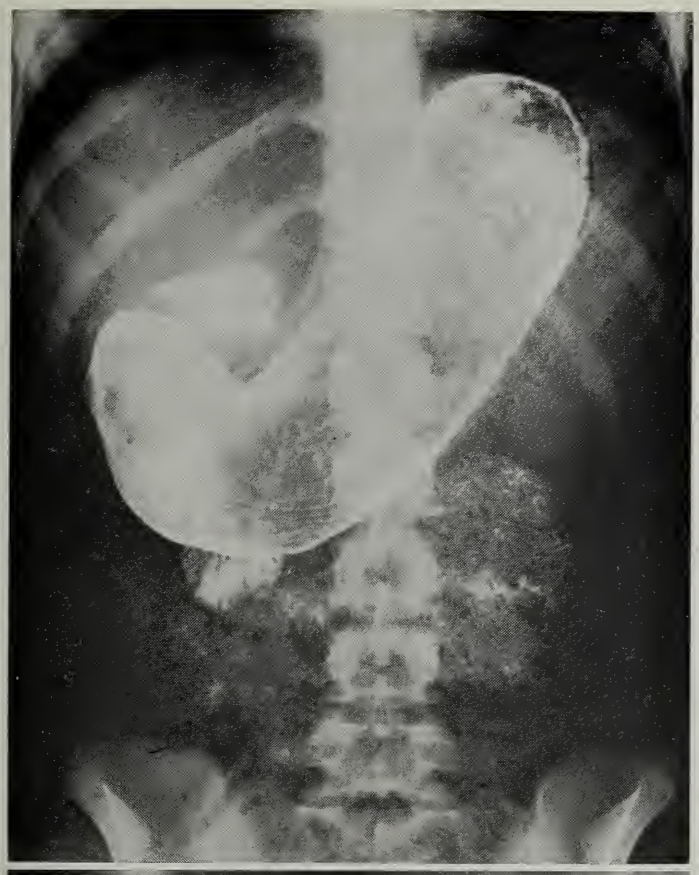


Figure 1. A PA projection of the barium filled stomach and duodenum, revealing the large radiolucent foreign body within the body and antrum of the stomach.



Figure 2. A lateral view again revealing the large bezoar filling much of the lumen of the stomach. On the original film a 1.5 x 1.0 cm. ulcer crater was clearly visualized along the anterior border of the upper part of the body of the stomach. This ulcer later perforated.

Clinicopathological Conference LXI

Conducted by the Department of Pathology
Mississippi Baptist Hospital
Jackson, Mississippi

THIS 64-YEAR-OLD white female was brought to the Emergency Room of the Mississippi Baptist Hospital on June 23, 1964, complaining of difficult breathing, chills, fever, rash, and swelling of the face and hands.

A note from her attending physician stated that she first became ill on June 5, 1964, when she developed abdominal pain and weakness, and vomited approximately 1,000 cc. of bright red blood. She was transfused at the local hospital with two pints of AB-Rh positive blood, and then transferred to a larger county hospital. A GI series done there revealed a small ulcer on the anterior stomach wall. She was treated with diet, Pro-Banthine, and Aludrox. She stopped bleeding and was able to return home on June 12, 1964.

On June 16, 1964 she developed chills, fever, cough and asthmatic type breathing. In addition, she developed swelling of hands and face and a generalized rash. She was again admitted to the local hospital on an ulcer diet, Benadryl and penicillin. She was also given 1 gm. of Chloromycetin, intravenously, and Trinsicon twice daily. The penicillin was stopped on June 19, 1964, as it was believed it might be the cause of the rash, though rash and swelling preceded the first dose. On June 22, the hematocrit was 31 per cent and the WBC was 4,660. As her condition did not improve, she was transferred to the Mississippi Baptist Hospital. Upon examination, the patient appeared acutely ill. The hands and face were swollen. She was dyspneic and the body was covered with an erythematous rash.

The physical findings were as follows: temperature, 103 degrees; pulse rate, 116 per minute; respiration 26 per minute; blood pressure, 130 systolic and 60 diastolic. There was no icterus on the sclerae; the posterior pharynx was edematous and hyperemic; the neck veins were not distended. The heart was negative. There were inspiratory and expiratory wheezing rales throughout both sides of the chest. The abdomen was not tender; there was no ascites and no organs or tumor masses were palpable. A CBC on admission revealed a hemoglobin of 10.5 gm. per cent and a hematocrit of 32 volumes per cent. The WBC was 3,800 with 1 monocyte, 91 lymphocytes, 8 segmenters; five atypical mononuclear cells were seen. The platelets were normal in appearance and number.

In CPC LXI, Dr. Clinton E. Wallace discusses the case of a 64-year-old white female who was admitted to the Mississippi Baptist Hospital with pertinent symptoms of chills, fever, rash, cough, and asthmatic type breathing.

She had been treated earlier at her local hospital with Benadryl, penicillin, Chloromycetin, and Trinsicon. About three weeks prior to admission, a GI series had revealed a small ulcer on the anterior stomach wall.

Other participants are Drs. Elmer J. Harris, Louis A. Schiesari, Guy Tillman Gillespie, Eugene J. Thomas, and J. Manning Hudson.

The urinalysis was negative. A chest x-ray was reported as normal except that the right leaf of the diaphragm was somewhat higher than the left.

The initial treatment consisted of oxygen under pressure with Alevaire and Isuprel. The patient also received .6 gm. of aspirin. There was some clearing of the chest. On the day following admission her WBC was 1,000 per cubic mm. with 100 per cent lymphocytes; the hemoglobin was 9.9 gm. per cent; the hematocrit 30 volumes per cent and the RBC 3,760,000. A GI series done on this date was reported as negative except for a small hiatal hernia. Additional laboratory studies on June 24 included serum bilirubin 0.65 mg. per

cent; glucose 56 mg. per cent, alkaline phosphatase 8.2 Bodanski units; total protein 4.68 grams per cent (albumin 2.85 gm., globulin 1.83 gm. per cent); BUN 13 gm. per cent; VDRL nonreactive. A bone marrow aspiration on June 24 was reported as severe hypoplasia of bone marrow; 400 cells were counted and the only cells present were represented by large hyperbasophilic lymphoid cells. Cells of the granulocytic and erythroid series were absent.

As the patient continued to spike temperature of 104 degrees and received only temporary relief from oxygen, she was given 100 mg. of Solu-Cortef at 1:00 p.m. on June 24. There was little if any improvement and at 7:00 p.m. of the same day the WBC was 500 per cubic mm., the hemoglobin 9 gm. per cent and hematocrit 30 volumes per cent. She was given one pint of whole blood and though the hemoglobin did not go below 9 gm., her WBC continued to fall and was reported as 300 per cubic mm. by 9:00 p.m. of June 25. Steroids were continued and Achromycin 250 mg. IM and penicillin 600,000 units every 12 hours were started.

She continued to run a downhill febrile course. The edema of throat, face, and hands did not subside. An electrocardiogram on June 25 revealed sinus tachycardia of 106, slight depression of ST in 2 and 3, and low T-1. On June 26 she developed frequent PVC and went into shock and became comatose. In spite of treatment with Levophed drips and automatic Bennett Machine, she expired at 10:40 a.m. on June 26, 1964.

Interim laboratory studies were febrile agglutinations of typhoid O 1:330, typhoid H 1:80, paratyphoid A 1:320, paratyphoid B 1:320; agglutination test with *Proteus, Brucella* and *Pasteurella Tularensis* were all negative. A serum potassium was 3.7 mEq. and sodium 141 mEq. Blood cultures taken on admission revealed no growth at the time of death.

X-RAY DATA

Dr. Clinton E. Wallace: "Dr. Harris would you show us the x-rays and comment on the elevated right leaf of the diaphragm?"

Dr. Elmer J. Harris: "Upon a film of the chest made on June 24, 1964, with the patient horizontal, it is seen that the lungs are grossly clear and the heart not enlarged. There is blunting at the right costophrenic sinus with the right leaf of the diaphragm somewhat higher than average."

Dr. Wallace: "Did you suspect that there was something under the diaphragm?"

Dr. Harris: "We really can't tell. Elevation could be caused either from adhesions above it or from other pathology, perhaps fluid, or it could be due to something below it."

Dr. Wallace: "As far as you're concerned, the mediastinum appears normal?"

Dr. Harris: "It does. There is no enlargement in the mediastinum to suggest adenopathy that might cause phrenic compression."

DISCUSSION

Dr. Wallace: "In summary we have a 64-year-old white female who apparently first became sick on June 5, 1964. The illness was associated with gastrointestinal hemorrhage and an x-ray diagnosis was made of a gastric ulcer. She was given transfusions and routine peptic ulcer medications and apparently improved. On June 16, 1964, she had an exacerbation of her original illness or had the onset of an entirely different illness manifested by chills, fever, cough, and asthmatic type breathing. This was associated with swelling of her face and hands with an erythematous type rash over the entire body. From this point, her illness was one dominated by a failing bone marrow evidenced by a decreasing white blood cell count. The differential was predominately lymphocytes. The absence of the normal erythroid and myeloid type cells in the bone marrow was noted. She did not respond to the various treatments, including steroids and antibiotics, and finally expired on June 26, 1964.

"The elevated right leaf of the diaphragm to the degree described by Dr. Harris is a little surprising to me. I did not anticipate this finding and had not planned to discuss conditions associated with significant elevation of the diaphragm. However, I will later mention a few conditions associated with this finding. As far as the original illness is concerned, I cannot tie anything mentioned in the protocol with the events which brought the patient to this hospital, except for the possibility of the mention of the AB positive blood being used in the transfusions. It is not usual that the people who prepare the protocol are so nice to us that they mention the type of blood. If she was given AB positive blood this could mean that by the old methods of typing that agglutination was present with all serum. The possibility exists that other iso-antibodies existed and that she may have had a severe blood transfusion reaction. If so, it is not described in the protocol. It is pure speculation, but severe blood

incompatibility has caused bone marrow hypoplasia or 'aplastic crisis' similar to the crisis sometimes seen with severe sickle cell anemia or congenital hemolytic anemia. I personally do not feel that this problem exists in this case. If it is a possibility, it would have been nice if some information had been volunteered in the protocol concerning a reaction during the transfusion.

TERMINAL ILLNESS

"Eleven days after the beginning of her first illness she developed her terminal illness with chills, fever, cough, and asthmatic type breathing. We get no history as to whether she had had any type of asthma previously. At this time she had swelling of her hands and face and a generalized rash. On the surface, it would sound as if she had some type of drug reaction. However, when looking at the drugs listed in the protocol, I do not see one that is commonly associated with such reactions. We are not told what her blood count was at the time of readmission to the other hospital, or when this illness first began.

"We do know that following the onset of the second phase of her illness or the second illness reported in the protocol, that she was given Chloromycetin, penicillin and Benadryl. The penicillin was discontinued, the belief being that it might have been responsible for the above mentioned symptoms. However, the protocol states that the rash and swelling were present prior to receiving the penicillin. This makes me wonder whether penicillin had not been given with the first illness—when she came in with gastrointestinal bleeding.

"Following these medications we get the first blood count reported from the other hospital. The first blood count on admission here revealed a WBC of 3,800. At this time there was little bone marrow activity as far as the myeloid series was concerned. It is reported that 91 per cent of the cells were lymphocytes and 5 were atypical mononuclear cells. So I think that by the time of admission to this hospital she had already begun to have failure of her bone marrow. This is substantiated by the continued reports in the protocol of the white cell count falling, and by the findings to the bone marrow aspiration. It is disturbing that the rash and swelling of her face and hands did not respond to steroid therapy. Apparently, she received steroids for several days.

"I asked Dr. Harris the question concerning her mediastinum primarily to rule out the possibility of some lesion in the superior mediastinum that might be causing superior vena cava obstruction. This obstruction could cause swelling of the face and hands but this should have been described as having a cyanotic tint. I cannot associate such a lesion with a generalized erythematous rash.

"I end up with a primary diagnosis of a failing bone marrow or, if you like, a refractive hypoplastic anemia, pancytopenic anemia or aplastic anemia. I think it is just a choice of words. Then, I have to decide or try to decide what is the cause. Looking at the protocol it would be easy to say that Chloromycetin was the etiology of 'aplastic anemia.' This may be true. Of the antibiotics that are commonly used, Chloromycetin is the most frequent cause of bone marrow depression. However, there are a lot of other situations in which bone marrow depression occurs and I feel I should talk about these briefly.

"First, however, I would like to ask Dr. Harris one more question. As far as the bone that you can see, do you see any evidence of osteoporosis or osteopetrosis?"

Dr. Harris: "Only a mild osteoporosis, but I would think this is about average for an individual 64 years old."

DIFFERENTIAL DIAGNOSIS

Dr. Wallace: "For a general discussion I feel that I should emphasize conditions causing a bone marrow failure. The so-called group of aleukemic leukemia is the situation in which the bone marrow is suppressed just by the number of leukemic cells present. Aleukemia exists prior to these cells being 'spilled out' into the general circulation. The finding of a hypoplastic marrow would tend to rule out these conditions.

"Certain chemical agents are associated with primarily refractive marrows. The response of the marrow is predictable with certain agents and examples of these are benzol, arsenic, gold, and associated drugs. It is known that if enough of these agents are given, bone marrow suppression will result. Then there are other drugs in which the response of the bone marrow cannot be predicted. There apparently exists some degree of sensitivity or particular abnormality in the enzyme systems of individuals in whom marrow depression results. Chloromycetin is the big drug in this group. Aplastic anemia has been reported fol-

lowing only one dose of chloromycetin. However, bone marrow depression is usually associated with large doses of Chloromycetin being given over prolonged periods of time. Practically all of the commonly used drugs, at one time or another, have been reported associated with bone marrow depression. Penicillin has been reported as causing aplastic anemia. This is certainly a rare finding.

"A common cause of marrow suppression is irradiation. I believe we can ignore this cause in this particular patient. The familiar Fanconi type of pancytopenia occurs at a much younger age group than our patient and need not be considered.

"The myelophthisis type of anemia in which there is bone marrow involvement or replacement by other cells or their tissues should be considered here. However, we have nothing in the protocol to suggest this situation. The G.I. series did not reveal any indication of a malignant lesion. A hiatal hernia was reported, and it is intriguing to wonder if the original bleeding episode occurred from this rather than from the small gastric ulcer.

"Multiple myeloma is commonly associated with bone marrow suppression. I remember one case well, in which we attempted four different bone marrows and were never able to make the diagnosis of multiple myeloma. The patient died of cerebral hemorrhage secondary to thrombocytopenia. It is interesting that at autopsy a chicken bone was found sticking through his duodenal cap.

"Other conditions causing bone marrow failure are the myelofibrosis group of diseases, some associated with myeloid metaplasia. However, we have nothing in the protocol to indicate any metaplasia. Osteopetrosis should be considered but should be strongly suggested only if dense bones are found on x-rays.

"There is the interesting group of diseases associated with 'hypersplenism.' In hypersplenism we should have some evidence of splenic enlargement. This was not described in the protocol. We have no evidence of some of the diseases currently associated with hypersplenism such as carcinomatosis, sarcoid, or miliary tuberculosis.

"One interesting condition I thought about while reading the protocol is the so-called 'benign thymoma' which have been reported associated with erythrogenic aplasia in the bone marrow. Actually, a few cases have occurred in which there has been pancytopenia. As described by the title, bone marrow failure occurs in the presence or associated with the presence of a benign tumor in the thymus. This would be an interesting diagnosis to consider. If the tumor were large enough to cause an obstruction of the superior vena cava it would have caused edema of the face and hands as described in this patient. However, such a lesion of this size should be obvious on the x-rays.

"I should now return to some of the findings mentioned in the protocol. The 'hyperbasophilic lymphoid cells' raise the possibility that these were myeloma cells. Against such a finding were the low total protein and the normal globulins. I examined the marrow myself and agreed that these described cells were lymphoid. Of interest was the finding of four megakaryocytes which were actively forming platelets and the finding of numerous lumps of platelets throughout the marrow slides. I believe the finding of elevation in the typhoid and parathyphoid agglutinations is an amnestic type of reaction. I feel that this is of no clinical significance. However, Wintrobe does mention that some of the older writers have stated that aplastic anemia has been associated with typhoid fever. He states that he has never seen a case. I do not believe that the clinical course is that of typhoid fever; the absence of an acute abdominal situation would tend to rule out perforation of the small intestine. She was described as having a slight elevation in the alkalin phosphatase and this associated with the finding of the elevated right hemidiaphragm brings up the possibility of some infiltrative lesion involving the liver. However, the liver was not described as extending below the right costal margin and there was no evidence of a granulomatous or a malignant disease found on the various studies.

"In summary I believe the patient had aplastic anemia (refractive hypoplastic anemia) secondary to Chloromycetin. I feel the possibility exists that she had some systemic sensitivity reaction to the Chloromycetin or other drugs manifested by bronchial spasm, rash and edema."

Dr. Louis A. Schiesari: "Dr. Gillespie, do you have any comment?"

PATIENT EVALUATION

Dr. Guy Tillman Gillespie: "Dr. Wallace has given an excellent discussion of this patient's problems and all the various possibilities that may produce aplastic bone marrow reactions and I would agree that the most likely one is the Chloromycetin. I think that when we are faced with the possibility of Chloromycetin-induced aplastic reaction of the marrow, there are several things to keep in mind in trying to evaluate these people. First of all, of course, we are impressed primarily with the blood counts at the time of evaluation. I think the severity of the drop in the various

blood counts is to some extent a measure of the severity of the reaction. In this particular case, her white blood count was already below normal when she was admitted to the hospital and it dropped rapidly down to a profound leukopenic level. I think the severity and the rapidity of this fall is an indication of the severity of her reaction. Her platelets were reported as 'normal in appearance and number' but I strongly suspect that they were not normal in number, at least, and that if we had gone to the laboratory and checked on this by direct examination of the blood smear we would have found that they were probably deficient. No platelet counts were actually reported that I can find in this protocol and I am a little surprised that she didn't have more trouble from bleeding and ecchymoses and things of that sort because that usually is a prominent feature of these aplastic reactions.

"I think the time interval of the onset of the aplastic reaction has a lot to do with how severe it is going to be also. In this case, apparently we were faced with evidence of an aplastic anemia within approximately a week or so after the Chloromycetin was given and this is a rapid onset. Many of even the moderately severe reactions don't appear for as long as four or five weeks and some of the milder reactions may take two or three months to show clinical evidence of the complications that result from a low platelet count or low white cell counts. Of course, the appearance of the marrow is another point of importance, and in this particular case the marrow was practically completely aplastic, at least on the aspirated smears. Now if there is an important point in trying to confirm the presence of a severe aplastic reaction this should be pursued to the point of getting a surgical biopsy of the marrow. I think in this particular case, we were confronted with a seriously, critically ill patient and we had pretty definite evidence of a severe aplastic reaction and I don't know that I would have gone to the extent of trying to insist on a surgical biopsy of the marrow at this time. Another point in evaluating the severity of these things is that on looking at the bone marrows, it has been reported that in the milder cases, there will appear some vacuolization of the proerythroblasts in the red cell precursors and if this sign is present, it is supposed to be a good prognostic sign for recovery. Apparently in this case we found only a few atypical cells, in fact I suppose it was difficult to tell whether they were in the red cell series or some other series and apparently this sign was not present.

CHLOROMYCETIN

"I think this case seriously emphasizes the point that Chloromycetin is a very dangerous drug. As a matter of fact, I have been aware of more aplastic anemia reactions from this drug in the past year or two than I was in the several years previously. I think it would certainly be important for us to decide, if possible, which patients can safely be given Chloromycetin. In this connection, it has been thought in the past, and is still probably largely true, that some patients are hypersensitive to this drug and will react even to small quantities of it whereas other patients will not show much reaction, to even large quantities. However, there have been some studies which show that if radioactive iron incorporation studies are done in which the uptake or incorporation of iron in the red blood cells is measured in patients on Chloromycetin there seems to be a uniform depression of this incorporation of radioactive iron into the red blood cells, even in supposedly normal people. So apparently everyone is subject to Chloromycetin toxicity to some extent, but it becomes important only in certain individuals who are much more sensitive. It has also been pointed out that many cases of aplastic reaction to this drug occur in people who have previously been anemic and their bone marrows are in a state of stimulation—erythroid stimulation—and perhaps this increased metabolic activity in the bone marrow is one thing that increases the sensitivity to the drug.

"Another thing that might be of some importance is related again to this report that we have of her blood being AB, Rh positive. It is my observation, unconfirmed by statistical studies, but nevertheless an observation which seems to be fairly valid because it occurs more frequently than we would expect with chance, that aplastic anemias and intrinsic bone marrow reactions of this type seem to occur more frequently in people with blood group A, Rh positive. As I say, this is an unconfirmed observation but of the past three or four cases of Chloromycetin aplastic anemias that I've seen, the blood type in all but one case was A positive. I think this may be of some significance. It may suggest that people with A positive blood groups should probably not be given Chloromycetin; in other words, that would be an additional deterring factor in deciding not to treat a person with Chloromycetin.

"Certainly I think Chloromycetin should be reserved only for the more serious and life threatening infections and especially if it can be proven that Chloromycetin is the only drug that would be effective in a particular infection. This should be done with culture and sensitivity studies, and it should be a situation where antibiotics are absolutely necessary. We have seen some aplastic anemias resulting from Chloromycetin given for relatively minor infections and this is certainly a tragic circumstance when it occurs, so I think we should be extremely careful in trying to avoid that."

DESTRUCTIVE PROCESS

Dr. Schiesari: "Any other comment?"

Dr. Eugene J. Thomas: "Let me ask a question. Could this rapid drop in white blood count be ascribed to a destructive process of the cells, rather than to aplasia?"

Dr. Gillespie: "With aplasia of the marrow, the white blood cell and the platelet count can drop rapidly because their life span and circulation is so short. The life span of white blood cells is generally from two to seven days depending on how fast they are being used to combat infection, and platelets have a short life span, also, in the range of two or three days. Of course, the anemia usually develops more gradually because the red blood cells have a life span of three months or so, unless there is some element of bleeding or hemolysis taking place, so that in the initial states we frequently find the anemia will not be so severe, but the leukopenia and thrombocytopenia often develop rapidly."

AUTOPSY REPORT

Dr. Schiesari: "At autopsy, there was found, hanging from the peritoneal surface of the anterior wall of the stomach, a tumor mass covered by normal peritoneum about 5 or 6 cm. in diameter; on the mucosa and corresponding to the implantation of this tumor mass there was a round, well-defined tissue defect about 1 cm. in diameter, the base of which was represented by the tumor and was covered with clotted blood. The discrepancy between the two x-ray reports can be explained by the fact that the bleeding was intermittent so that when the patient came here the so-called ulcer was filled with clotted blood and therefore, the x-ray department could not demonstrate the lesion. The entire small intestine, from the duodenum to the cecum showed patchy, bluish-red, smooth areas. Cutting across these areas the intestinal wall was thickened, spongy and oozing blood. Microscopically, the tumor mass of the stomach showed a benign capillary hemangioma (Figure 1). The other lesions of the

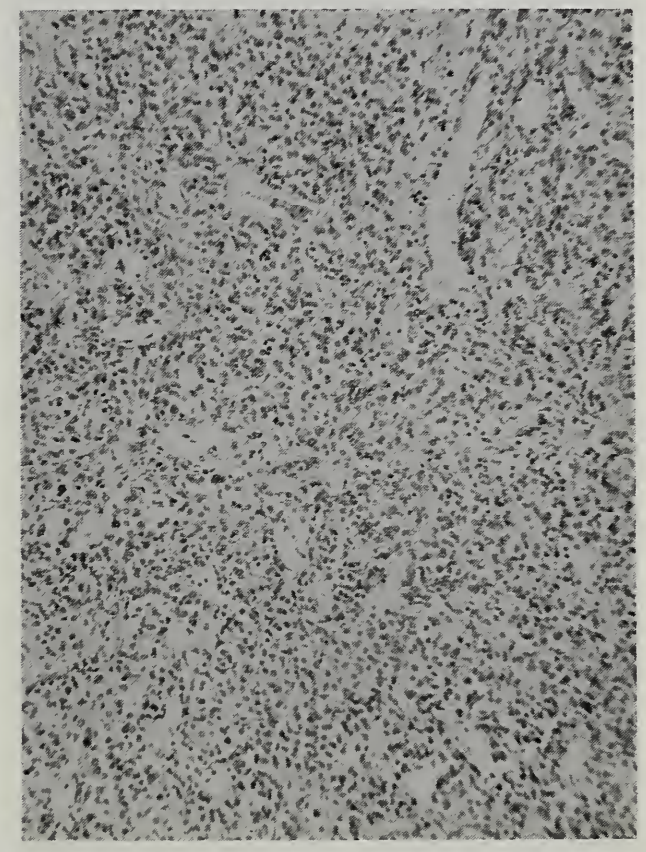


Figure 1

intestine showed aggregates of large vessels distended with blood, both in the submucosa and the subserosa (Figure 2).

"This patient had a very rare condition, that I saw only once before in this hospital during the past eight years and that we could call hemangiomas or, because of its diffuse involvement, hemangiomatosis of the GI tract. In the other case that I mentioned it was confined to a short tract of the small intestine, which is the most common occurrence. This is, as you know, not a true neoplasm but a congenital anomaly to be placed in the category of the hamartomas.

"Now, considering the second part of the problem, we tried two sites for the bone marrow aspiration, sternum and pelvis; in both sites we got the same results: We couldn't find cells of erythroid or myeloid series. At autopsy several bone specimens were taken from the sternum and the vertebrae and the sections showed a fatty, extremely hypoplastic marrow with only a few groups of



Figure 2

lymphocytes present. But, to our surprise, the megakaryocytes were present in a good number (Figure 3). From this we can assume that the drug or drugs that the patient received had a selective action on erythroid and myeloid series, sparing the megakaryocytes. The large lymphoid cells with abundant heavily basophilic cytoplasm described in the smears of bone marrow are not specific being a frequent finding on both bone marrow and peripheral blood and are interpreted as reacting cells to a virus or allergic insult."

Dr. J. Manning Hudson: "Obviously she was sick already before she got the Chloromycetin unless she got it in the first hospital. In fact when she went back to that hospital the second time she already had swelling of her hands and face, rash, high fever with chills, so she was sick before she ever got that drip with Chloromycetin. So I think she had some previous medications."

Dr. Schiesari: "Very likely so. Dr. St. Clair who attended this patient, tried to get all the information he could concerning the medication, but evidently it was impossible to gather all the pertaining data."

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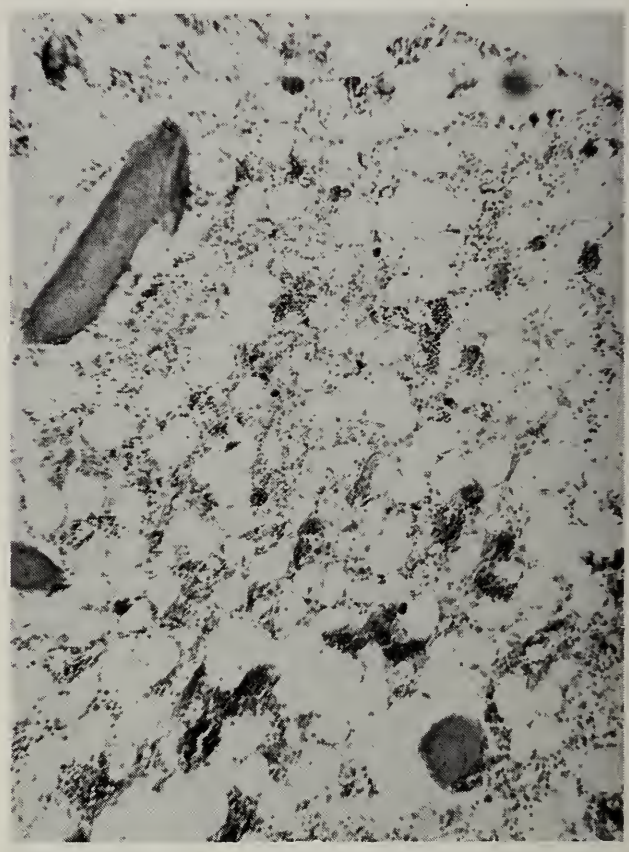


Figure 3

LUCKY BREAK

A medical student's allowance had run out for the third month in a row so it was with some trepidation that he wrote home for additional funds. Trying to improve his situation, he ended his letter: "P.S. I did not like writing you about this. In fact, I tried to get my letter back from the postman."

A week later he received this reply from home: "You will be glad to know we did not receive your letter."

Book Reviews

The Specialties in General Practice. Edited by Russell L. Cecil, M.D., and Howard F. Conn, M.D., 3rd edition, 676 pages with illustrations. Philadelphia: W. B. Saunders Company, 1964. $17.50.

The third edition of this text edited by Cecil and Conn contains 15 chapters prepared by 18 distinguished specialists. Its purpose as stated by the editors is to "serve as a useful, ready handbook for general practitioners" bearing "particularly on the everyday problems of the doctor located in areas where early consultation with the specialist is not feasible." In most part this purpose is fulfilled.

Space does not allow review of each chapter; however, certain merits warrant special notice and praise and in the same critical evaluation certain faults need pointing out.

Most chapters are written in a free flowing, easily readable manner with emphasis on the particular needs of the busy general practitioner. The sections on surgery and orthopedic trauma devote attention to pre and postoperative care and expected complications as well as the important aspects of diagnosis and do not dwell on operative procedures. The obstetrics, gynecology, pediatrics, and eye, ear, nose, and throat sections are presented with emphasis on the problems that frequently confront the general practitioner. Particularly outstanding are the chapters on dermatology and psychiatry, each of which present a great deal of useful information in a comprehensive and yet concise manner. Included also is a section entitled "The Clinical Laboratory" which provides up-to-date information on the laboratory resources available to the physician in his local hospital laboratory or by mailing specimen to a larger, distant laboratory. With this section there are 15 pages of tables of normal values which is a most helpful source of reference. All chapters are well illustrated and make excellent use of diagrams.

One glaring fault is the omission of a section on internal medicine. Perhaps the editors consider most general practitioners adequately trained on the usual medical problems. This may be so; however, I believe a section touching on the present day knowledge of diagnosis and treatment of congestive heart failure, coronary heart disease, hypertension, chronic lung disease, diabetes and anemia, to name only a few, is needed to make this text complete. The chapter on diseases of the anus, rectum and colon is entirely too verbose. It is noted that to this area of interest 54 pages are devoted, as compared with only 45 pages in the combined chapter on obstetrics and gynecology.

All in all, I feel that the editors and contributors have achieved their purpose in providing a useful text of information, review and reference for the general practitioner.

JOHN Y. GIBSON, M.D.

Emergency Treatment and Management. By Thos. Flint, Jr., M.D., Associate Physician, Kaiser Foundation Rehabilitation Center and Senior Consultant, Emergency Department and Division of Industrial Relations, Kaiser Foundation Hospital, Vallejo, Calif. 686 pages with illustrations. Philadelphia and London: W. B. Saunders Company, 1964. $8.75.

This is a very good book, excellently written, concise, which can be used to advantage by any practicing physician who sees emergency cases. It will be more valuable close at hand in the emergency room, office, or physician's bag rather than on a shelf in the hospital or physician's library.

The book is divided into three major sections. The first gives general principles and procedures followed by a section on the care of specific conditions and finally a short section on administrative, clerical, and medico-legal procedures—all subdivided into 76 topics. The cross reference system used by the writer is the most valuable asset of the book. This, coupled with an adequate index, gives the physician who takes the trouble to keep this volume handy a good method of treatment at his fingertips for practically any emergency condition.

This book would be worth owning just for the section on poisons which take up 176 of its 686 pages. The need for this revision is shown in this important section on poisons which has been brought up to date quite adequately. The topics on coma and shock are also to be especially commended.

The author's comment on the abuse of emergency facilities is quite frank and describes a

(Please see page 72)



The President Speaking

'A Course For 1965'

OMAR SIMMONS, M.D.
Newton, Mississippi

OUR ASSOCIATION'S 16 component medical societies conducted 69 meetings last year. The several specialty societies are estimated to have met on about 30 occasions within the state, and our annual session offered three and a half days of intensive scientific activity. By driving no further than 100 miles, every member can easily participate in the formal work of his profession. More likely than not, he can do so without leaving his home community.

It is distressingly apparent that physicians have too many meetings, but we are not alone. The same is true of bankers, attorneys, ministers, and business and community leaders. When we doctors absent ourselves from our local society meeting, from our hospital staff, or from major convocations such as the association's annual session, we do ourselves—not the organization—a disservice. The overriding loss is a missed opportunity to learn, however little or trivial the new knowledge may be. We lose also in fraternal and professional contact with our colleagues. And we are unrepresented, making the work of those who give of their time and substance to occupy offices of responsibility more difficult.

It has been well stated that each profession is responsible for the perpetuation of its discipline, the increase of its knowledge, and the training of its disciples. We are also cautioned in the same admonition that each profession contains the seeds of its own destruction. Where there is near-universal participation, frequent communication, and constructive debate within a professional body, there is also progress, growth, and a prosperity of knowledge and service potential. Let this be the course and direction of MSMA in 1965. ★★★

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EDITORIALS

The French Cross of Gold

I

Sir Winston Churchill was quoted as telling his war cabinet on an occasion when he was especially provoked with Charles de Gaulle that "each of us has his cross to bear, and mine is the Cross of Lorraine." A quarter of a century later, the French people are staggering under another burden, the cross of social security. Right now, in fact, all Gaul's money is divided into three parts: Defense, social security, and a third for the sum of other government services. Not only is the system deeply in the red, but it is also threatening the already insecure national economy.

About 30 million of France's population of 48 million are compulsorily included in the social security system. The 1964 deficit is reliably estimated at $36 million, an increase of more than 350 per cent over the 1963 deficit of $10.5 million. But that isn't the last of the bad news: French fiscal experts now say that the 1970 deficit will hit $3.4 billion!

Today, the worker in France pays 6 per cent of his wages for social security, and his employer is required to pay 18 per cent, a total of 24 per cent of payroll. The total costs of the program, according to the authoritative Insurance Economics Society of America, are now about $18 billion annually. The current national budget of France is $18.5 billion. So the high tax upon employee and employer which threatens to bankrupt French industry is barely preventing national bankruptcy.

II

In a special report submitted to President de Gaulle, French Labor Minister Gilbert Grandval said that "the solution cannot be found in the framework of the present system." Although pessimistic, Grandval is apparently accurate and truthful, because family benefits and pensions have risen substantially, especially during the period 1957 through 1962. But in the same period, the government health services costs rose more than 200 per cent.

Then comes the clincher in Grandval's report: *The health insurance program, rather than the retirement and other benefits, is the chief drain on the system.*

Yet, the nonmedical aspects of French social security are just short of being sorry tokens in comparison with the high taxation. Despite the escalation of the pension level to the tune of 54 per cent during the five year period, payments are still quite low. Any reduction to accommodate the health care deficit would involve a political risk that Le Grand Charles isn't likely to take, and general elections are on the 1965 agenda. Demographically, this is exerting a telling effect,

too, because family allowances (corresponding roughly to U. S. welfare programs) account for only about 17 per cent of the gross expenditure. Of this, Grandval says: "The effort in the matter of family allowances should not be slowed down . . ." pointing out that the French birth rate is "not only without comparison to that of African or Asian nations but is also very inferior to that of the United States."

III

French physicians, according to IESA, are exceedingly uncomfortable and wary about all these goings-on. Many of them are now treating patients at fees set not by themselves or their medical societies but by the social security system. The medical profession is said to fear the same total, inclusive system of government health care which was thrust upon their colleagues in Belgium. In the spring of 1964, Labor Minister Grandval issued new regulations moving in that direction, but he backed down when confronted toe-to-toe by the doctors.

Nor is the French medical profession optimistic about its future in an election year, either. Many seem to fear a dramatic move on the part of the canny, ambitious de Gaulle, even to the extent of a full and total government system of medical care devoid of choice or option. This concern is nothing new, for Dr. Etienne Royer de Vericourt of Paris stated in 1960 that "the government of France aims to make us the servants of the social security administration, and the medical profession will never accept."

The liberal U. S. magazine, *Newsweek,* commenting on de Vericourt's statement, said that "Hippocrates would have been surprised." Back from Europe came a good answer: No, Hippocrates wouldn't have been surprised, because he stressed individual treatment of the individual patient. In fact, the statement continued, had Hippocrates known compulsory health care under a system of social security, he probably would have worded his oath more strongly!

IV

The American people have been faced with this crucial issue for the better part of a quarter of a century. Labor sponsors are still parading ghosts and specters of poverty while the gross national product zooms to $660 billion. Now there is talk of compromise, sugar coating, and legislation on compulsory federal health care which "everyone can live with." But the Capulets and Montagues concluded long ago that a rose by any other name smells about the same, and there is simply no evidence to support the notion that a compromise federal health care program would have a lovelier bouquet than King-Anderson.

Two generations ago, William Jennings Bryan talked his way into American history protesting the crucifixion of mankind on a cross of gold. Today, Bryan's liberal successors are ironically engaged in reversing exactly his peroration. Shouldn't the French experience be a lesson to us?—R.B.K.

Local Care Of Mental Illness

Surprising and gratifying progress has been achieved by general hospitals in developing inpatient care facilities for mental illness. The research arm of the Blue Cross Association reports in this connection that "emphasis has shifted to the acute general hospital, and this shift is expected to become even more pronounced in the near future." Obviously, the move in this direction is beneficial to the patient, the medical profession, and to the community.

Our governmental hospitals dedicated to care of mental illness are strained, operating at capacity plus. Their respective plights have hardly been helped by the influx of aging patients whose senility cannot reasonably be classified as a purely mental condition. It logically follows that care of the mental patient in the general hospital really amounts to a needed expansion of medical facilities, relieving to some small extent the overburdened specialized, long-term care institutions.

There are other benefits, too, with improvement in uninterrupted continuity of care, hospitalization of the patient in his home community near his family, a clinical environment from which discharge is the usual expectation, and the organic capacity to deal concomitantly with physical disorders. Until about two decades ago, a general hospital was little more than a way station for the mental patient, a sort of temporary stop en route to the psychiatric institution. The picture is changing dramatically.

Last year, more than 800 nonpsychiatric hospitals possessed active inpatient care facilities for mental patients. Of these, only 150 were federal institutions, largely Veterans Administration and military units. About 200 were under state and local government sponsorship, 19 were proprietary, and the vast majority, some 442, were pri-

vate, nonprofit institutions. All together, these facilities had more than 22,000 psychiatric beds.

State mental care planning councils, the interagency bodies representing all segments of the health care team, strongly support this direction in medical facilities development. It is a prime example of local responsibility being translated into meaningful service.—R.B.K.

FDA Initiates New Drug Scrutiny

The Food and Drug Administration's indefatigable Dr. Joseph F. Sadusk, Jr., has set himself to the gargantuan task of finding out which drugs contain even minute traces of penicillin and what FDA will do about it. Long a subject for discussion by clinicians and researchers, most physicians will recall the tempest over the trace quantities of the antibiotic contained in the Salk poliomyelitis vaccine.

Dr. Sadusk recently assembled a select panel of authorities in allergy and posed the key question: How much trace quantity penicillin can an allergic person absorb without undersirable reaction and what amounts of penicillin taken regularly would cause otherwise nonaffected individuals to become sensitized to this particular drug?

The Pharmaceutical Manufacturers Association reports that the allergy experts were supplied data on trace amounts of penicillin found as deliberately included or extraneous material in some drug products. In some instances, these amounts were no greater than naturally-occurring quantities of penicillin found in cheese. It is expected that FDA will soon issue new directives on this question, and conceivably, every drug maker who handles penicillin or purchases materials from another who does would come under a new scrutiny.—R.B.K.

LETTERS

SIRS: It has just been called to my attention that my reputation and that of J. D. Ratcliff have been attacked in an editorial in the September (1964) issue of the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION. I assume that in a spirit of fair play you will permit me to defend myself by publishing this letter.

The facts presented in the August 1964 *Reader's Digest* article, "Why Do We Let These Babies Die?" are verifiable. They have been consistent over a period of years and are based on official figures compiled and published by the World Health Organization. Your statement, "What may be recorded as a live birth and an infant death in one country may legally and scientifically be a stillbirth and fetal death in another" is simply not true for the infant mortality rates in the particular countries cited in the article. Indeed, the use of such comparisons in infant mortality rates has just been validated by an Expert Advisory Committee of Vital Statisticians to the Children's Bureau.

But all of this is beside the point. The state of Mississippi has the highest infant mortality rate in the United States. The rates in all of the other 49 states are lower. On the average out of every 1,000 babies born alive in Mississippi, over 41 die before they reach one year of age. The Mississippi State Medical Association and the JOURNAL should direct their attack against this serious problem rather than waste their time on a Boston physician and a New York science writer.

DAVID D. RUTSTEIN, M.D.
PROFESSOR OF PREVENTIVE MEDICINE
AND HEAD OF THE DEPARTMENT
HARVARD UNIVERSITY MEDICAL SCHOOL
BOSTON, MASSACHUSETTS

In the editorial to which Dr. Rutstein makes reference, the JOURNAL disagreed with his and Mr. Ratcliff's views and the arguments through which these views were adduced. We regret exceedingly that Dr. Rutstein gained the impression that his and Mr. Ratcliff's reputations were thereby under attack; this was neither the intention nor the inclination of the JOURNAL. In this connection, the editorial pointed out that "We hope and believe that the authors (Dr. Rutstein and Mr. Ratcliff) share the genuine deep concern over perinatal death which have moved American medicine to initiate, develop, and support with dues funds programs of research, study, and positive action to bring about decreases in the rate."

Since specific exception is taken only to the statement, "What may be recorded as a live birth and an infant death in one country may legally and scientifically be a stillbirth and fetal death in another," we shall assume that other points made in our editorial are not at issue. If the author accepts as authoritative the publications of the World Health Organization, then reference to the *United Nations 1962 Demographic Yearbook* would seem appropriate. In this connection, the *Yearbook* states:

"Perhaps the most important and widespread limitation on the comparability of infant mortality rates is that resulting from compiling statistics of infant deaths and live birth by date of registration rather than date of occurrence of the event. Where these procedures obtain a large increase, for whatever reason, in the number of live births registered in any one year may introduce sizable errors into the infant mortality rates, especially since deaths tend to be more promptly reported than births.

"If delay in the registration remains nearly constant and is approximately the same for births and deaths, the rates are not affected in any appreciable degree. But if—as is the case in many countries—a large proportion of the births are not registered until many years after occurrence, then infant mortality rates obtained by relating infant deaths for any one year to births which occurred over a period of years have little validity. . . ."

We submit that there is no alternative in arriving at an infant mortality rate, usually computed on a basis of so many per 1,000 live births, to comparison of deaths with live births occurring during the same period for which the mortality rate is being sought. The *Yearbook* continues:

"Even on a date-of-occurrence basis, under-registration of births and infant deaths also affects the infant mortality rates unless the proportion registered is the same for both components. . . . As noted, above, differences in levels of completeness between the two components of the infant mortality rate, i.e., the infant deaths and the live births, will bias the rates upward or downward, the direction of the bias depending on which component is more fully registered. . . .

"Another factor which has a bearing on the completeness of live birth and infant death registration is that concerned with the statistical definition of the event to be reported."

This is precisely the point which our JOURNAL editorial made and the point to which Dr. Rutstein takes exception. Continues the *Yearbook:*

"The exclusion from both the live birth and death register of live born infants who die before 24 hours of age or before registration of birth may distort the statistics to some extent, tending to give the rates a downward bias."

The American Medical Association's Committee on Maternal and Child Care points out these variations in five nations claiming lower infant mortality rates than those of the United States:

Netherlands. Does not list as infant deaths those infants who die before registration of birth. This sometimes is as long as a week. Babies born alive who die within three or four days would be listed as stillbirths.

Sweden. Until 1960, the only evidence of life recognized in establishing live births was the act of breathing.

Finland. Infants weighing less than 800 gm. are not included in the stillborn statistics.

United Kingdom. Data tabulated by year of occurrence for England and Wales and by year of registration for North Ireland and Scotland. Births before 28 weeks gestation are recorded as stillbirths.

Ireland. Data on events registered within one year of occurrence, and the data are tabulated by year of registration rather than occurrence.

The JOURNAL, therefore, stands by its statement, having presented full documentation upon which the one sentence to which Dr. Rutstein takes exception was based.

The final paragraph of Dr. Rutstein's letter appears to introduce a new aspect to this dialogue. No responsible Mississippian either excuses or justifies the infant mortality rate on the basis of a variety of problems which may not be apparent in Massachusetts. On the other hand, the progressive *decrease* in this rate is indicative of the determination of our splendid public health program and a dedicated profession to do everything possible to achieve the lowest possible level with the ideal—but obviously unattainable—goal being zero. We find no panacea for this challenge in Dr. Rutstein's and Mr. Ratcliff's advocacy of a vastly expanded, nationwide nurse-midwife program nor in their urging that "the federal government should assume the job of instructing prospective mothers in the need for better care and the measures for obtaining it."—W.M.D.

REFERENCES

1. Rutstein, D. D., and Ratcliff, J. D.: Why Do We Let These Babies Die? Reader's Digest 85:56 (Aug.) 1964.
2. Department of Community Health and Health Education and Committee on Maternal and Child Care, American Medical Association: How Is a Nation's Health Level Measured? J.A.M.A. 189:321 (July 27) 1964.

Drs. Rhine To Conduct ESP Symposium As Headline Event of 97th Annual Session

The internationally renowned investigator and pioneer in the field of parapsychology, Dr. J. B. Rhine of Duke University, and his wife-colleague, Dr. Louisa E. Rhine, will present a Symposium on Parapsychology as a special feature of the scientific assembly at the 97th Annual Session, Biloxi, May 10-13, 1965. This was the announcement of Drs. James L. Royals of Jackson, chairman of the Council on Scientific Assembly, and Omar Simmons of Newton, president of the association.



Dr. J. B. Rhine

The Drs. Rhine are scheduled to present three papers dealing respectively with the field of the science, its methods, progress, and present status; typical cases of spontaneous parapsychical experience; and principal findings and developments. A test demonstration, a film, and discussion period will be included in the symposium.

Dr. J. B. Rhine has pursued his research as chairman of the Parapsychological Laboratory at Duke for 38 years. He has written extensively on extrasensory perception and psychokinesis and has appeared before many recognized scientific bodies including medical groups. In 1950, he lectured before the Royal Society of Medicine at London, and he has worked actively with leading universities and foundations in his specialized field. Dr. Rhine is founder and editor of the *Journal of Parapsychology* which is published under the aegis of the Duke University Press.

Dr. Louisa E. Rhine received her B.S., M.S., and Ph.D. degrees from the University of Chicago. She and Dr. J. B. were married when both were graduate students, and since, she has devoted her career to the field of parapsychology. Dr. Louisa is a respected author in her own right.

The symposium has been scheduled for Wednesday morning, May 12. It will be open to guests of association members.

Following a format determined by the House of Delegates at the 1964 annual session, the Scientific Assembly will meet in daily general sessions instead of the former section groups. The seven scientific sections, however, still retain their respective professional identities, elect their own officers, and determine program content, Dr. Royals said.

The four day meet will begin with specialty society conclaves and the opening of the House of Delegates on Monday, May 10. On Tuesday morning, a general session on medicine will be conducted, while the afternoon program will feature obstetrics, gynecology, and surgery. The parapsychology symposium will be presented on the morning of May 12, and a general session on general practice and preventive medicine will highlight the afternoon program.



Dr. Louisa E. Rhine

Two simultaneous sessions will be conducted on Thursday morning, May 13, the concluding day of the meeting, one on ophthalmology and otolaryngology and the other on pediatrics. The final meeting of the House of Delegates that afternoon will conclude the annual session with final action on reports and resolutions and election of 1965-66 officers.

The Woman's Auxiliary will conduct its 42nd Annual Session during May 10-12, according to Mrs. Thomas J. Safley of Jackson, state president, beginning the preconvention executive board meeting on Monday. The ladies' general session will begin at 9 o'clock a.m. on May 11, concluding with the annual luncheon. The featured speaker

will be Dr. Jack Schreiber of Canfield, Ohio. Mrs. J. H. Gaddy of Gulfport is president-elect, and Mrs. Wallace S. Sekul of Biloxi is general chairman of the meeting.

Drs. Royals and Simmons said that about 15 specialty societies will meet concurrently with the association, presenting a variety of programs, luncheons, and dinner occasions. Medical alumni groups representing Ole Miss, Tennessee, and Tulane will sponsor fellowship-dinner meetings.

Social highlight of the annual session will be a unique "fun occasion" on the evening of May 12, also an innovation to the format of prior years. Dr. Royals said that the Council on Scientific Assembly had agreed to the arrangements as succeeding the traditional formal banquet. The theme and features, soon to be announced, "will include no speeches—just fellowship, unusual food, fun, and entertainment," Dr. Royals added.

Site of the annual session headquarters is the recently refurbished and enlarged Buena Vista Hotel-Motel complex. The beach front property has been augmented with a four story luxury addition to the motel's tropical setting, and the main hotel building was further modernized and renovated in 1964. The council reported that arrangements have also been made with other leading Gulf Coast hotels and motels, providing in excess of 700 air conditioned rooms and suites for the session.

Members of the Council on Scientific Assembly include Drs. Ralph Sneed of Jackson, EENT; Maria Mangold of Yazoo City, Pediatrics; Max L. Pharr of Jackson, General Practice; R. J. Field, Jr., of Centreville, Surgery; F. Earl Fyke of Jackson, Medicine; John T. Kitchings of Jackson, Ob-Gyn; W. E. Noblin of Jackson, Preventive Medicine; Omar Simmons of Newton, president; Everett H. Crawford of Tylertown, president-elect; and James L. Royals of Jackson, chairman.

Dr. Crawford Heads South Central Society

Dr. Walter W. Crawford of Tylertown will serve the South Central Mississippi Medical Society as its 1965 president.

Dr. A. V. Beacham, of Magnolia is the new secretary.

Officers were elected by the society at the Dec. 15 meeting.

U. S. News Quotes MSMA President-elect



Senior editor of U. S. News and World Report Stephen L. Freeland, left, interviewed Dr. Everett H. Crawford of Tylerton, MSMA president-elect, on prospects for fedicare in 1965 at the recent Miami AMA convention. Crawford's views were published by the national news magazine in December.

Mental Health Council Reviews Year's Work

Five special-study task groups have made 177 recommendations to the Mississippi Mental Health Planning Council for a long-range state program of mental health services.

Mrs. Sara Caldwell, council chairman, announced the total in reviewing the accomplishments of the Mental Health Planning Program participants through 1964.

"The council wishes to express its appreciation," said Mrs. Caldwell, "to the more than 100 Mississippians who worked so hard and attended so many meetings this year to give us the benefit of their thinking."

She said the 177 recommendations now before the council include 50 on mental illness in adults, 11 on multi-problem families, 40 on emotional disturbance in children, 35 on alcoholism and 41 on crime and delinquency. These recommendations have been reviewed by the council in a series of meetings which began in September.

Early in 1965, the inter-agency council will begin to weld all the recommendations into a proposal for a comprehensive state program of mental health services, with emphasis on services at local and regional levels.

Two other task groups will make their recommendations to the council this year. One deals with the need for trained manpower in the fight against mental illness. The other is concerned with biometrics and research on mental health matters.

The 15-member council, representing the various organizations interested in mental health, will serve as the special study group on ways to implement the proposed program. In this regard, the council will make recommendations for the administration and financing of the proposed program, as well as for any state legislation which may be needed.

MSMA's representative on the council is Dr. John J. Head.

Dr. Norwood Receives Fifty Year Club Insignia

Dr. Carl W. Norwood of Corinth received the certificate and pin of the Fifty Year Club at the recent year-end meeting of the Northeast Mississippi Medical Society. Dr. DeWitt Hamrick of Corinth made the presentation.

Dr. Norwood received his medical degree from the University of Tennessee in 1914. He opened his practice in Corinth in 1919. Guest speaker for the meeting was Dr. Hector Howard of Memphis who discussed "Recent Advances in Cardiovascular Surgery." Dr. Omar Simmons of Newton, MSMA president, also addressed the group.



Officers and guests at the recent year-end meeting of the Northeast Mississippi Medical Society at Tupelo are, from the left, Drs. S. Jay McDuffie of Nettleton, secretary; Hector Howard of Memphis who addressed the group on "Recent Advances in Cardiovascular Surgery"; Omar Simmons of Newton, MSMA president, and J. T. Davis of Corinth, District 3 Trustee.

Dr. Herring Spends Month in Ethiopia

Dr. Emmett Herring of Hattiesburg returned home Dec. 20 after a month in mission station hospitals in Ethiopia. Dr. Herring served in the African country under the auspices of the Christian Medical Society. The Society, composed of doctors vitally interested in the missionary medical field, gives assistance to mission hospitals in the form of drugs, supplies, and short-term programs of medical help.

Dr. Herring's interest in Ethiopia stemmed from his friendship with Dr. Richard Scheel, a classmate at the University of Illinois Medical School who is now a medical missionary at the Sudan Interior Mission, a nondenominational hospital at Sodo.

Early in 1964, Dr. Herring was invited to go to Ethiopia to lecture, conduct clinics, and perform surgery. His schedule was worked out by the various mission groups. Leaving Hattiesburg on Nov. 18, Dr. Herring arrived in Addis Ababa on Nov. 23 to attend a three-day Inter-Mission Conference. Problems of the medical missionaries were discussed during this meeting.

The Hattiesburg specialist spent the remainder of his time at four mission station hospitals operated by the United Presbyterians, the Mennonites, the Baptists, and the SIM nondenominational group. At the time of his visit there were seven doctors at the four facilities, plus a senior medical student working on a fellowship from an American drug company.

He found that the major eye problem in this region is trachoma. As the disease has been largely eradicated in this country, Dr. Herring had never seen a case, but found that more than half of the Ethiopians are afflicted. Because it is so prevalent, the mission doctors were particularly adept at the corrective surgical procedure.

However, although cataracts are another major problem, especially in the older age group, the mission doctors hesitated to do cataract operations because of lack of experience. Of the more than 30 operations Dr. Herring performed while in Ethiopia, all but six were for cataracts. The mission physicians observed his work and then performed cataract operations under his guidance.

Care and treatment at the mission hospitals is not free, said Dr. Herring, but the charge is minimal. For diagnosis, a cataract operation, and

postoperative care, the charge was about $18 in American money.

Dr. Herring found all of the hospitals he visited, including several operated by the government with foreign staffs, adequate, but greatly handicapped because of lack of funds and proper medical and nursing personnel.

Dr. Samuel Field Heads State Board of Health

Dr. Samuel E. Field, Sr., of the Field Memorial Community Hospital in Centreville, took office Jan. 4 as president of the Mississippi State Board of Health.

Dr. Field succeeds Dr. Harvey F. Garrison, Jr., of Jackson, whose term expired in 1965. The Centreville surgeon has served as a member of the Board of Health continuously since January 1942. On the 10-member board he represents the district comprised of Claiborne, Copiah, Jefferson, Lincoln, Adams, Wilkinson, Amite, Franklin, Pike, and Walthall Counties.

In commenting on Dr. Field's elevation to the presidency, Dr. A. L. Gray, executive officer of the board said, "Dr. Sam, as he is known to his close associates, has been an outstanding member of the Board of Health for 22 years, always devoting his best to its affairs. I do not recall his having missed a meeting."

New members of the Board's executive committee are Dr. Garrison, Dr. George A. Archer of Greenville, and Dr. A. L. Gray, state health officer.

Blood Banking Meet Set for March 18-20

The Seventh Annual Meeting of the South Central Association of Blood Banks will be held in Austin, Texas on March 18, 19, and 20 at the Villa Capri Motel.

Any member of the medical professions, administrative or technical personnel, or members of biological or chemical sciences interested in blood banking is invited to register. Registration fees will be $3.00 for members and $5.00 for nonmembers, according to Mrs. Florence Del Prete, secretary of the association.

A workshop on administration will be conducted on Thursday afternoon, March 18, under the direction of Mrs. Dorothy C. Smith, administrative director of the Jacksonville, Fla., Blood Bank.

Papers scheduled for Friday, March 19, include "Blood Banking—Then and Now" by Mrs. Smith; "Use of Segments in Crossmatching," by Darwin E. Kolle, technical director of the W. E. Stewart Blood Bank in Tyler, Texas; "What's my Line" by Dr. Robert E. Klein of Gainesville, Fla., president of the American Association of Blood Banks; "Practicing Journalistic Medicine" by Thomas Sherlock of Scottsdale, Ariz.

Panel discussions set for Friday will be on the subjects "Blood Users," "What the Physician Expects from the Blood Bank," and "Answer to the Need of the Community and the Physician."

Papers set for the Saturday, March 20 meeting, include "Standardization of ABO Typing Serum," by Dr. L. Ruth Guy, of Parkland Hospital Blood Bank, Dallas, Texas; "Paid Donor," by Richard Dice, of the Community Blood and Plasma Service, Birmingham, Ala.; "Plasmapheresis in a Community Hospital Blood Bank," by Dr. John A. Shively of Houston, Texas; "Virus Isolations in Hepatitis," by Dr. E. E. Muirhead of Detroit, Mich.

On Saturday afternoon a technical workshop will be conducted by Dr. David E. Soules of the Wadley Blood Bank in Dallas.

Further information may be secured from the South Central Association of Blood Banks, 3600 Gaston Avenue, Dallas, Texas 75246.

Pearl River Society Is 100 Per Cent for '65

The Pearl River County Medical Society became the first state association component body to reach 100 per cent of its renewable membership for 1965, and every member has voluntarily contributed to the American Medical Association Education and Research Foundation for the same period.

Under the society's local policy, AMA-ERF contributions are made by members at the time of annual dues payments. State association officers have extended congratulations and commendations to the group.

The Society officers for 1965 are Drs. W. F. Stringer of Poplarville, president, and S. S. Kety, vice president, and J. C. Griffing, secretary, both of Picayune.

Other members from Picayune are Drs. Donald R. Berry, Dewitt L. Bolton, James M. Howell,

Dennis E. Magee, Samuel O. Massey, Jr., Don C. Rudeen, George B. Stewart, and Leonard B. Wamnes, Jr. Dr. Joe H. Powell resides and practices at Poplarville.

State Morbidity Reported Through Dec. 25

The Mississippi State Board of Health reports the following occurrence of morbidity for 1964 through the 52nd week of the year, ending Dec. 25, 1964. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul.	1,053
Tuberculosis, O.F.	203
Salmonella infections	54
Brucellosis	3
Encephalitis, infectious	30
Typhoid Fever	5
Dysentery	
Bacillary	81
Amoebic	12
Dysentery, N.O.S.	3
Food Poisoning, N.O.S.	5
Diphtheria	5
Septicemia, Staph.	25
Septicemia, Strep.	1
Septicemia of newborn	1
Diarrhea of newborn	8
Septicemia, N.O.S.	15
Septicemia, Other	1
Meningococcal infection	26
Meningitis, O.F.	55
Gastro-enteritis	4
Tularemia	5
Mononucleosis, infectious	78
Toxoplasmosis	3
Hepatitis, infectious	251
Hepatitis, serum	1
Tetanus	5
Bacterial Diseases, Other	1
Poliomyelitis	1
Helminthic infections	
Hookworm	1,068
Ascariasis	294
Strongyloides	63
Blastomycosis	3
Histoplasmosis	22
Sepsis, puerperal	8
Rheumatic fever	4
Rocky Mountain Spotted Fever	1
Myelitis	2
Polyneuritis	1
Moniliasis	1
Adenovirus	2
Mycotic, N.O.S.	1
Other inf. and parasitic diseases	1
Streptococcus infections	
Scarlet fever	158
Strep throat	3,109
Taeniasis	8
Pertussis	120
Measles	6,778
Chickenpox	1,101
Mumps	981
Other Cestode Infestations	11
Influenza	464
Gonorrhea	5,075
Syphilis	
Early	556
Late	149



NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

Erwin, William Jenkens, Jackson. Born, Meridian, Miss., Feb. 9, 1934; M.D., Louisiana State University School of Medicine, New Orleans, 1957; interned Confederate Memorial Medical Center, Shreveport, La., one year; pathology residency, Charity Hospital of Louisiana, New Orleans, one year; psychiatry residency, University of Virginia Hospital, Charlottesville, three years; member American Psychiatric Association, the American Association in Advancement of Science, and the D. C. Wilson Society; elected Nov. 3, 1964, by Central Medical Society.

Jackson, James Robert, Jackson. Born Fayetteville, N. C., Sept. 4, 1931; M.D., Duke University School of Medicine, Durham, N. C., 1956; interned Duke Hospital, Durham, N. C., one year; neurosurgery residency, Duke Hospital, Durham, N. C., five years; member Congress of Neurological Surgeons; captain, U. S. Air Force, two years; elected Nov. 3, 1964, by Central Medical Society.

Stone, Eugene Carroll, Jr., Oxford. Born Memphis, Tenn., Jan. 9, 1922; M.D., Boston Uni-

versity School of Medicine, Mass., 1946; interned U. S. Naval Hospital, Chelsea, Mass., one year; internal medicine residency, U. S. Naval Hospital, Chelsea, Mass.; member, American Academy of General Practice; elected Oct. 15, 1964, by North Mississippi Medical Society.

DEATHS

BONNEY, CALEB WILDY, Satartia. M.D., University of Louisville School of Medicine, Ky., 1891; Emeritus member of MSMA and member of the MSMA Fifty Year Club; died Dec. 28, 1964, aged 94.

MCLEOD, DAN, McLain. M.D., Atlanta School of Medicine, Ga., 1913; died May 20, 1964, aged 76.

TALLEY, JOSEPH SANFORD, Greenwood. M.D., University of Tennessee College of Medicine, Memphis, 1960; interned Baptist Memorial Hospital, Memphis, Tenn., one year; died Dec. 13, 1964, aged 30.

PERSONALS

GEORGE A. BROWN of Water Valley, district surgeon for the Illinois Central, has been recognized by the IC for his 40 years of service with the railroad. Dr. Brown received a letter of congratulations from President Wayne A. Johnston and a lifetime pass.

RAYMOND W. BROWNING of Greenwood; RICHARD H. CLARK, JR., of Hattiesburg; WILLIAM R. FAIN of Jackson, and HUGH S. RAYNER of Meridian were inducted as Fellows of the American College of Surgeons during the college's annual Clinical Congress in Chicago.

THURMAN T. JUSTICE, JR., of Gulfport; ROBERT R. MCGEE of Clarksdale, WILLIAM E. WEEMS of Laurel, and JOHN D. WOFFORD of Greenwood have been designated Fellows of the American College of Physicians.

WILLIAM A. TISDALE is the new president of the medical staff of Howard Memorial Hospital in Biloxi.

Tri-State Conference Meets in Biloxi

The ninth annual Tri-State Thoracic Consecutive Case Conference was held Jan. 8 and 9 in Biloxi.

Jointly sponsored by the tuberculosis associations and thoracic societies of Mississippi, Alabama, and Louisiana, physician members of the thoracic societies from the three states convened to discuss advances in tuberculosis and other respiratory diseases.

Dr. Clyde A. Watkins, president of the Mississippi Thoracic Society and superintendent of the Mississippi State Sanitorium, and Dr. Guy D. Campbell of Jackson, second vice president of the Mississippi Tuberculosis Association and supervisor of tuberculosis control of the Veterans Administration, represented the state organizations.

Guest discussants included Dr. Watts R. Webb, professor of surgery and chairman of the Division of Cardiovascular Surgery, University of Texas Southwestern Medical School in Dallas; Dr. William R. Mitchum, radiologist, Methodist Hospital, and instructor in radiology, University of Tennessee College of Medicine, Memphis, Tenn., and Dr. A. E. Anderson, attending internist, Baptist Memorial Hospital, Jacksonville, Fla.

Speakers for the Mississippi program which was presented Friday, Jan. 8 were Dr. Myra D. Tyler, director of Pulmonary Research, University of Mississippi School of Medicine; Dr. William A. Neely, associate professor of surgery, University of Mississippi School of Medicine, and Dr. J. Harold Conn, clinical associate professor of surgery, University of Mississippi School of Medicine and chief of surgical service, Veterans Administration Hospital, Jackson.

problem all of us encounter in our "emergency rooms." Most physicians who see patients in the "emergency rooms" have also experienced the problem the author referred to—delayed treatment of urgent cases because of the over abundance of nonurgent cases.

The section on medicolegal aspects is tailored for the state of California but will serve at least as an outline for physicians anywhere in the country.

This book lives up to its title and will be a welcome addition to any physician in any specialty who sees emergency cases.

A. K. MARTINOLICH, JR., M.D.

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION
JACKSON, MISSISSIPPI

March 1965

Dear Doctor:

Washington observers say that the House Committee on Ways and Means will have a slightly modified version of King-Anderson ready by March 10. Speculation is that benefit schedules will be revised and that the high Social Security tax may be pushed even higher to finance the program.

> An AMA delegation, headed by Dr. Donovan Ward, appeared before the committee in executive session on February 9. Major public education campaign by AMA on eldercare counterproposal is underway, making use of magazines, newspapers, and local TV and radio, since networks refused to sell time.

The Tobacco Institute reports that "reverse smokers" in the south Caribbean "are free of cancer." This unusual technique of smoking involves putting the lighted end of the cigarette inside the mouth. All things considered, both scientific and practical, neither reverse nor conventional smoking can be recommended.

A rabies outbreak in Rome has been deemed sufficiently serious to warrant keeping tourists away from the catacombs. At least one death has been traced to dogbite, and city authorities have opened 32 centers for rabies vaccination of pets. Dog owners who neglect having both muzzle and leash on animals are subject to fines.

Scientists from the University of Washington have made on-site studies of Bikini and Eniwetok where last U.S. nuclear bomb tests were conducted. Atolls are still bereft of human residents, but plants, animals, and fish abound. Except for small group of islands, residual radiation levels are not dangerous to human habitation.

Another influential professional group, the Mississippi State Pharmaceutical Association, has announced opposition to administration's fedicare bill. Action was taken by MSPA executive committee and formally communicated to state medical association last month.

Sincerely,

Rowland B. Kennedy
Executive Secretary

DATELINE - MEDICAL AMERICA

Planning Council Reports Shortage Of Mental Health Personnel

Jackson - The state is being drained of its best talent in the four major mental health professions, says Dr. Dorothy Moore who heads the staff of the state planning council. Shortage of personnel, in which MSMA Committee on Mental Health concurs, includes psychiatrists, psychologists, nurses, and social workers. Dr. Moore said that training capacities for psychiatrists and nurses are inadequate for needs and that state possesses no training facilities for psychologists and social workers.

Home Fluoridation Equipment Is Tax-Deductible

Washington - The Internal Revenue Service has ruled that all costs of equipment used for fluoridation of household water supplies, when installed on advice of a dentist, are deductible as a medical expense from federal income taxes. Basis of decision is that expense of medical care also includes prevention of disease in structure and function of the human body. Citation is Rev. Rul. 64-267, I.R.B. 1964-40, 6.

Harvard Dermatologist Wins $250,000 Libel Suit

Cambridge - Dr. William R. Hill, Jr., instructor in dermatology at Harvard Medical School, was awarded $250,000 in a libel suit against a manufacturer of electric shavers. Suit alleged that shaver maker listed plaintiff as co-author of a medical journal article which he did not write. Paper, widely circulated for advertising purposes, said that electric shaver was less likely to cause skin lesions than blades.

Tahitian Women Are Said 'Most Edentulous'

New York - Dental authorities report that the women of Tahiti, long famed for their beauty, are losing their teeth during their early 20's. Survey showed that there are but 13 dentists in all Tahitian islands. When MGM filmed "Mutiny on the Bounty" recently, its prop department had to distribute 250 sets of dentures to female extras.

Medicine Vending Machines Are Out In Georgia

Atlanta - The attorney general of Georgia has outlawed the use of mechanical medicine dispensing devices in hospitals as being contrary to the spirit and intents of the state's pharmacy laws. Gadgets were used as labor savers for routinely prescribed drugs. Attorney general's opinion listed as principal objection the fact that Rx is not handled by a registered pharmacist since nurse reads orders and pushes button. Ruling further held that patient-personalized label instructions, also required by law, are thereby omitted.

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March 1965, Vol. VI, No. 3

ORIGINAL PAPERS

A Comparative Study of Lidocaine and Mepivacaine for Spinal Anesthesia

MILTON R. YORK, M.D.; HAPPY L. GEE, M.D.; JAMES F. SAVAGE, M.D., and LEONARD W. FABIAN, M.D.
Jackson, Mississippi

An evaluation of two anesthetics for use in spinal anesthesia has shown that lidocaine and mepivacaine are satisfactory for short surgical procedures, and it appears that mepivacaine is superior in many respects for this purpose. A series of patients is presented and details of the studies are discussed.

SINCE ITS INTRODUCTION, mepivacaine has had numerous clinical trials and because of its effectiveness and low toxicity, the compound has compared favorably with lidocaine. Ulfendahl[1] has found the lethal toxicity of mepivacaine to be greater than procaine but less than lidocaine. Without the addition of epinephrine, mepivacaine has been found to have a longer duration of action than lidocaine in conduction anesthesia.

Since mepivacaine and lidocaine are similar amides and are similar in many other respects, it was decided that a study comparing the two drugs for spinal anesthesia should be conducted. Dunn and associates[2] have reported previously the use of mepivacaine for spinal anesthesia and found the drug satisfactory for short surgical procedures.

METHOD

One hundred and thirty-seven patients received lumbar subarachnoid blocks with mepivacaine. These included 98 males and 39 females. The age range was from 15 to 86 years.

Forty-seven patients received lumbar subarachnoid blocks with lidocaine. These included 11 males and 36 females. The age range was 15 to 89 years. The blood pressure, pulse rate, and depth and rate of respiration were monitored by conventional means. All anesthesias were performed by residents in anesthesia in all stages of training.

In 123 cases mepivacaine spinal anesthesia was administered to patients placed in the lateral position for lumbar puncture and in the other 14, anesthetics were administered utilizing the prone position. All 47 lidocaine spinal anesthetics were administered to patients placed in the lateral position. All lumbar punctures were performed with a 20- or a 22-gauge spinal needle utilizing either the L2-L3 or L3-L4 interspace.

The sites of operation in patients receiving mepivacaine and lidocaine spinal anesthesia are shown in Table 1. Of 56 lower abdominal procedures with mepivacaine, over three-fourths were inguinal herniorrhapies, suprapubic prostatectomies, or caesarian sections. Of 26 perineal procedures, almost 50 per cent were vaginal hysterectomies and the remainder hemorrhoidectomies or related procedures. There were 26 transurethral procedures. The 4 hip pinnings were separated from the lower extremity classification because of

From the Department of Anesthesiology, University of Mississippi Medical Center, and the Division of Anesthesiology, Department of Surgery, Veterans Administration Hospital.

the unique anesthetic requirements for this type of patient. Mepivacaine spinal anesthesia was employed in 25 lower extremity operations for phlebectomy, amputation, or skin grafts.

Of 33 lower abdominal procedures with lidocaine, over 80 per cent were caesarian sections, Pomeroy sterilization procedures, or inguinal herniorrhaphies. The five perineal procedures were

TABLE 1
SITE OF OPERATIONS

	Patients	
	MEPIVACAINE	LIDOCAINE
Lower Abdominal	56	33
Perineal	26	5
Transurethral	26	3
Hip Pinning	4	1
Lower Extremity	25	5
Total	137	47

for vaginal hysterectomies, D & C and rectal operations. There were 3 transurethral procedures and 1 hip pinning. Of the 5 lower extremity procedures 3 were debridements and the others were a phlebectomy and a skin grafting procedure.

Mepivacaine hydrochloride was supplied in 2 ml. ampules containing 4 per cent sterile isobaric solution for spinal anesthesia. Hyperbaric solutions were prepared by mixing 1 ml. of 10 per cent dextrose solution with 2 ml. of 4 per cent mepivacaine. Hypobaric solutions were generally prepared by mixing 1 volume of mepivacaine solution and 3 volumes of distilled water in order to obtain a 1 per cent solution.

Lidocaine hydrochloride was supplied in 2 ml. ampules containing 5 per cent sterile hyperbaric solution for spinal anesthesia. Before injection it was diluted with 1 ml. cerebrospinal fluid so that the final volume would be equal to the volume used in the mepivacaine patients.

TABLE 2
SUMMARY OF PATIENTS RECEIVING MEPIVACAINE SPINAL ANESTHESIA

Age	*Number of Patients*	*Hypobaric*	*Hyperbaric*	*Phenylephrine Added*
10 to 19	5		5	2
20 to 29	16	1	15	4
30 to 39	13		13	3
40 to 49	22	5	17	1
50 to 59	21	3	18	4
60 to 69	37	2	35	5
70 & Over	23	3	20	2
Total	137	14	123	21

Table 2 summarizes patients receiving mepivacaine spinal anesthesia. The dose was almost always 80 mg. There were 123 hyperbaric spinal anesthetics and 14 hypobaric spinal anesthetics. Phenylephrine, 1 to 2 mg., was added to the anesthetic solutions in 21 instances.

TABLE 3
SUMMARY OF PATIENTS RECEIVING LIDOCAINE SPINAL ANESTHESIA

Age	*Number of Patients*	*Hyperbaric*	*Phenylephrine Added*
10 to 19	2	2	1
20 to 29	15	15	
30 to 39	17	17	
40 to 49			
50 to 59	8	8	2
60 to 69	4	4	1
70 & Over	1	1	
Total	47	47	4

Table 3 summarizes patients receiving lidocaine anesthesia. The dose was always 100 mg. and all were hyperbaric. In 4 instances phenylephrine, 1-2 mg., was added to the solutions.

RESULTS

In an attempt to evaluate the results of mepivacaine and lidocaine spinal anesthesia, only the patients whose charts contained sufficient information as to height of level of anesthesia over a 30-60 minute period and information as to duration of anesthesia were selected. Charts were excluded if the levels attained were not recorded periodically or if the duration of anesthesia was not recorded beyond the length of the surgical procedures.

In general, onset of anesthesia with mepivacaine and lidocaine was immediate and the desired level obtained within the first three minutes. There was a tendency for the progressive elevation of anesthesia level of from 1 to 4 dermatomes over the first 15 minutes, but after this time limit the level was usually stable. Mepivacaine with phenylephrine added seems to show less of a tendency to "drift" than mepivacaine alone. Lidocaine had a tendency to "drift" more than either of the mepivacaine solutions.

Table 4 summarizes the immediate results of the mepivacaine and lidocaine spinal anesthetics.

TABLE 4

IMMEDIATE RESULTS OF MEPIVACAINE AND LIDOCAINE SPINAL ANESTHESIA

Dosage	*No.*	*Onset*	*Level 2 min.*	*Level 5 min.*	*Level 15 min.*	*Duration Range*	*Average*
Mepivacaine 80 mg. with Neo.	12	Immediate	T11 Range T12-T5	T9 Range T12-T5	T7 Range T10-T4	75-210	151 min.
Mepivacaine 80 mg.	21	Immediate	T10 R-L1-T6	T8 R-T12-T4	T6 R10-C2	65-190	124 min.
Lidocaine 80 mg.	22	Immediate	T7 R-L2-T2	T5 R-L1-C3	T4 T10-C2	35-180	67 min.

It will be noted that levels of anesthesia in the lidocaine group rose rapidly to high levels and at times was almost uncontrollable. Both mepivacaine solutions had a rapid onset but were more easily controlled, with the solution containing phenylephrine being the easiest to control. The duration of anesthesia was measured from the time of injection of the anesthetic agent until sensation was demonstrated at the level of the operative site. The duration of mepivacaine alone was approximately two hours and with the addition of phenylephrine the duration was approximately two and one-half hours. Lidocaine, however, usually produced anesthesia for a maximum of slightly over one hour.

Table 5 summarizes the complications noted in patients receiving mepivacaine and lidocaine anesthesia. There were no instances of toxic reactions

TABLE 5

IMMEDIATE COMPLICATIONS FOLLOWING MEPIVACAINE AND LIDOCAINE SPINAL ANESTHESIA

	Number	*Number Requiring Vasopressor*	*Failure*
Mepivacaine ...	137	55 (40%)	6 (4%)
Lidocaine	47	25 (55%)	6 (13%)

such as excessive irritability, circulatory or respiratory depression. Vasopressors were required to support peripheral blood pressure in 55 patients (40 per cent) who received mepivacaine and in 25 patients (55 per cent) who received lidocaine. The need for blood pressure support was increased with both age and with height of anesthesia. There was only one postspinal headache in this series and this was in a patient who received lidocaine.

In 137 cases who received mepivacaine there were 6 instances (4 per cent) where the anesthesia was classified as a failure. In 4 of these cases, the failure could be attributed either to inexperience with mepivacaine spinal anesthesia or to technical difficulties. The other 2 were cases where the surgery outlasted the anesthesia.

In the 47 cases who received lidocaine, there were also 6 instances (13 per cent) where the anesthesia was classified as a failure. Two of these cases could be attributed to inexperience or technical difficulties, and the other 4 were cases where the surgery outlasted the anesthesia.

SUMMARY

Because mepivacaine and lidocaine are chemically similar and their actions as local anesthetics are also very similar, with the possible exception that mepivacaine has greater diffusibility and duration, a study was done to compare the two drugs as spinal anesthetics.

Mepivacaine was administered in 137 patients, and 47 patients received lidocaine for spinal anesthesia.

The average duration of the anesthetics were as follows: mepivacaine (80 mg.) without phenylephrine was 124 minutes with a range of 65-190 minutes. Mepivacaine (80 mg.) with phenylephrine was 151 minutes with a range of 75 to 210 minutes. Lidocaine (100 mg.) had an average duration of 67 minutes with a range of 35-180 minutes.

Mepivacaine had less of a tendency to spread than lidocaine and the addition of phenylephrine to mepivacaine made the tendency to spread even less. It was therefore easier to control the mepivacaine anesthetic, and this may account for the fact that there were only 4 per cent failures with mepivacaine whereas there were 13 per cent failures with lidocaine. Both drugs had immediate onset of anesthesia.

In this study, under the conditions previously described, mepivacaine appears to be a superior spinal anesthetic drug with regard to duration, dependability, and ease of controllability.

Supported in part by a grant from Winthrop Laboratories who also supplied the mepivacaine (Carbocaine®) for this study. Lidocaine (Xylocaine®) was supplied by Astra Pharmaceutical Products, Inc.

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IT'S AN ILL WIND

The real estate agent was showing a physician a clinic building for lease. "Doctor," he said, "I must confess that there are a couple of drawbacks on this building I ought to mention. It's bounded on the north by the gasworks, on the south by the vinegar factory, on the east by the city dump, and on the west by the paper mill."

"My stars," exclaimed the physician, "I can't imagine establishing my practice in this neighborhood."

"Yes," said the realtor, "but look at the advantages: You'll always know the wind direction."

Cytogenetics in Clinical Practice

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Simplified techniques of sex chromatin determination and chromosome analysis can provide answers to several perplexing problems in clinical practice. Chromosome analysis can confirm a clinical suspicion of Down's syndrome (mongolism) and provide a more accurate basis for genetic counseling by differentiating familial types. Chromosome analysis is helpful in establishing the diagnosis and suggesting the prognosis in two rarer syndromes of multiple congenital abnormalities, 13-15 trisomy and 16-18 trisomy. Gonadal dysgenesis (Turner's syndrome) in the female, and one type of testicular atrophy (Klinefelter's syndrome) in the male can be differentiated from other causes of gonadal failure by a combination of sex chromatin and chromosome analysis. Chronic granulocytic leukemia is distinguished by a specific chromosomal abnormality in the leukemic cells. In selected cases, cytogenetic study of cells from pleural or peritoneal effusions may be helpful in the diagnosis of malignancy.

RECENT TECHNICAL DEVELOPMENTS in cytogenetics have provided useful tools in the clinical practice of medicine. The discovery of the sex chromatin body has led to wide clinical application in the differentiation of intersex problems using the buccal smear technique.[1] Advancement of tissue culture methods utilizing colchicine arrest to collect large numbers of mitoses in metaphase, and hypotonic treatment to separate the chromosomes led to the discovery that the normal chromosome number of man is 46 rather than 48 as had been previously reported. Human tissue cultures initiated from bone marrow or skin biopsies have been greatly augmented by the development of methods for chromosome analysis using leukocytes from peripheral blood.[2] Thus Lejeune in 1959 was able to establish the association of a human disease syndrome, mongolism, with the presence of an additional chromosome. Since that time several disease states have been shown to be associated with chromosomal abnormalities, leading to clinical applications of chromosome analysis in several broad areas of medicine.[3]

NORMAL HUMAN KARYOTYPE

After various periods of incubation at 37° C, depending on the type of cells cultured, dividing cells are arrested in the metaphase stage of mitosis by colchicine treatment. The cells are then treated in hypotonic solution to produce separation of the individual chromosomes, acid-fixed and stained. A small drop of cell suspension is placed on a slide, squashed under a coverslip by firm pressure of the thumb, and examined using an ordinary light microscope. Unbroken cells with the chromosomes adequately dispersed are then selected and the chromosomes counted in each individual cell. In general, 30 or more cells are counted. Selected individual cells are then photographed, the photographs enlarged, and individual chromosomes are cut out, paired, and arranged in a systematic manner to form what is known as a karyotype.

Figure 1 illustrates a normal human male karyotype. The chromosomes are arranged in the order of size. The largest chromosome is about 7 μ in length, or about as long as the diameter of a red blood cell. Where similarity in size occurs, the pairs are arranged according to the position of the centromere, which is the point of attachment of the chromosome to the cell spindle. The centromere appears as a constriction with the usual

From the Department of Preventive Medicine, University of Mississippi School of Medicine.
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methods of staining. Chromosome pairs number 1, 2, 3, 16 and the Y chromosome are usually individually distinguishable. The other chromosomes can be placed into general groups, but are not always individually recognizable. The groups are 1-3 (A), 4-5 (B), 6-12 and X (C), 13-15 (D), 16-18 (E), 19-20 (F), and 21-22 and Y (G). There are 22 pairs called autosomes, and two sex chromosomes. Females have two X chromosomes belonging to the C or 6-12 group and males have one X chromosome and a Y chromosome belonging to the G or 21-22 group. Small portions of chromatin material called satellites may be attached by slender chromatin threads to the short arms of any of the chromosomes in group 13-15 (D) and group 21-22 (G), but these are not invariably present. Secondary constrictions in addition to the centromere may occasionally be observed in the long arms of chromosome number 1, in one of the group 6-12 (C) group pairs, in the long arm of chromosome pair 16, and in the long arm of the Y chromosome. The Y chromosome is usually larger than either 21 or 22, and its long arms appear to diverge less.[4]

SEX DETERMINATION

One of the areas of clinical application in which chromosome analysis can be most useful is in the determination of sex in the individual with ambiguous external genitalia. In man, the Y chromosome is male-determining and either the X, the autosomes, or both are female-determining.[5] Turner's syndrome is a well-recognized clinical entity due to a chromosomal abnormality. These individuals are females who are physically short in stature, fail to menstruate, often have webbing of the neck and cubitus valgus or increased carrying angle of the arms. The associated gonadal dysgenesis leads to failure of development of secondary sex characteristics resulting in small genitalia, little pubic hair, and underdeveloped breasts. The buccal smear indicates a chromatin negative pattern and chromosome analysis usually reveals only 45 chromosomes, one X chromosome being absent.



Figure 1. Normal human male karyotype.

The male type sex chromatin pattern is thus accounted for, since these individuals have only one X chromosome. Some are chromosome mosaics, having one chromosome karyotype in some cells and another karyotype in other cells. Such combinations as XO/XY, XO/XX, Xx, XO/XXX, X iso-X, and XO/XYY have been reported; however, the clinical syndrome of short stature and gonadal dysgenesis with its attendant failure of development of secondary sex characteristics is common to all of these cytogenetic types, with relatively minor clinical variations.[6]

Some females have XXX chromosome constitutions. No consistent clinical syndrome has yet been found to result from this abnormality. Many of these individuals are mentally retarded and have been detected by large-scale screening studies of sex chromatin in institutions for mental defectives. There is a complex but small association between mental defect and XXX chromosome constitution as shown by the fact that the incidence of XXX females is about three times as high in institutionalized mental defectives as in the general population.[7]

Klinefelter's syndrome represents the male counterpart of abnormal chromosome constitution. These patients typically are of eunuchoid habitus with small atrophic firm testes, a small penis, and lack of development of secondary male characteristics such as deep voice, beard, and pubic hair. They often have gynecomastia, especially when they are obese. Chromosome analysis usually reveals 47 chromosomes with an XXY sex-chromosome pattern. Since there are two X chromosomes, the buccal smear is positive, or female, in type. Other chromosome patterns may be associated with this syndrome such as XXXY, XXXXY, XXYY, XYY, and XX/XXY or XY/XXY mosaics. Many of these individuals are mentally retarded. Again, however, the clinical syndrome is the same in all cases with minor variations, and the patient is readily recognizable as a male with underdeveloped secondary sex characteristics.[8]

True hermaphrodites have both testicular and ovarian tissues present. These individuals have been found to have XX, XY, or mosaic XO/XY chromosome constitutions. The pseudohermaphrodites with ambiguous genitalia can be distinguished as male (XY) or female (XX), and thus the basic genetic constitution can be established. Here the clinical application is more difficult, in that such factors as physical development of the genitalia, whether the child has been reared as a boy or girl, and psychological identification with one sex or the other, may outweigh the true genetic sex in the clinical management of the patient. Chromosome analysis must play a part in the overall evaluation of these patients, however. It may also be of special value in determining the true sex of the female infant with masculinization due to the adrenogenital syndrome. Here the demonstration of a female sex chromatin pattern on buccal smear, and XX chromosome constitution can lead to the proper treatment with suppressive steroid medication and reversion of the genital ambiguity to that of a normal female infant.

TRISOMY SYNDROMES

The presence of one additional chromosome in the karyotype giving three chromosomes of one particular pair and a total of 47 chromosomes is called trisomy. Three trisomies have now become well-established clinical syndromes.

An additional chromosome in the 13-15 (D) group leads to a syndrome consisting of multiple congenital abnormalities in the new-born infant. The characteristic features are mental retardation, deafness, seizures, cleft palate, cleft lip, and eye defects, usually microphthalmia. A variety of other abnormalities may also be present, some of which are listed in Table 1. The features which should alert the physician, however, are harelip and cleft palate in a mentally retarded infant with eye defects.[9]

TABLE 1

CLINICAL FINDINGS IN 13-15 TRISOMY SYNDROME

Mental Retardation	Eye Defects
Deafness	Congenital Heart Defects
Seizures	Hyperconvex Fingernails
Cleft Palate	Hemangiomata
Cleft Lip	Polydactyly

Also: Horizonal palmar creases, low-set ears, flexion of fingers and hands, lacunar skull, retroflexibility of thumbs, rocker-bottom feet, hypotonia, spina bifida, micrognathia.

The 16-18 (E) trisomy syndrome usually consists of mental retardation, low-set and malformed ears, small mandible, hypotonicity and flexion of the index finger over the third. Other congenital abnormalities are often present, especially defects of the heart, kidneys, and gastrointestinal tract. These findings are summarized in Table 2. Again, the clues to the clinical diagnosis are the low-set, malformed ears, small mandible, and mental retardation in association with other congenital defects. The fact that there is still some discussion

as to whether the additional chromosome is number 17 or 18 matters little in the clinical detection of such infants, since the findings usually fall into a recognizable clinical pattern. Perhaps the most valuable aspect of chromosome analysis in both the 13-15 and 16-18 trisomies is in confirming the prognosis, since most of these infants die in early infancy.[10]

TABLE 2

CLINICAL FINDINGS IN 16-18 TRISOMY SYNDROME

Mental Retardation	Hypertonicity
Failure to Thrive	I-V Septal Defect
Ears Low-set and Malformed	Patent Ductus Arteriosus
Small Mandible	Prominent Occiput
Finger Flexion, Index over Third	Hernia
Dorsiflexion of Big Toes	Foot Deformities
	Renal Anomalies

Also: Meckel's diverticulum, heterotopic pancreatic tissue, short sternum, small pelvis, eventration of diaphragm, loose skin folds, syndactyly of second and third toes, interatrial septal defect, corneal opacity, pyloric tumor, malrotation of colon, harelip and cleft palate, ptosis of one eyelid, high-arched palate, short neck, high number of arches in dermal patterns.

Mongolism, or Down's syndrome as it is now frequently referred to in the medical literature, is due to trisomy for chromosome 21 as illustrated in Figure 2. Clinical findings in this syndrome are summarized in Table 3. With such a well-recognized clinical syndrome, the average clinician has no difficulty in recognizing the mentally retarded child with epicanthic folds, slanting eyes, enlarged protruding tongue, and transverse palmar creases. Occasionally, however, we are faced with the problem of diagnosis in an infant who has only one or two of these findings. Here chromosome analysis can be most helpful in the proper management of such infants by providing an early diagnosis.

Instead of the typical 47 chromosome trisomy 21, some of the individuals with Down's syndrome have what appears to be 46 chromosomes. But

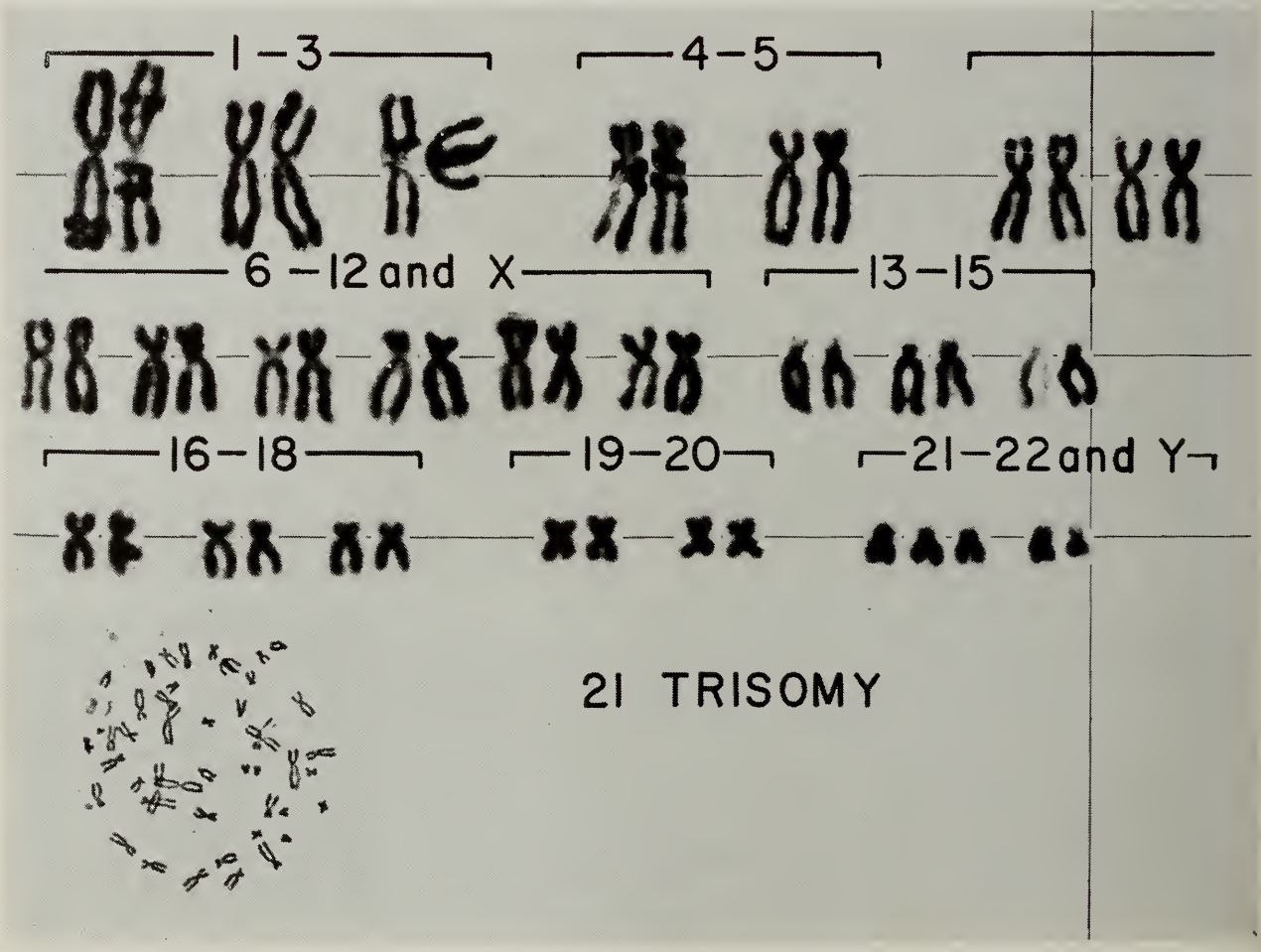


Figure 2. Trisomy for chromosome 21 found in Down's syndrome (mongolism).

karyotype analysis reveals an extra 21 chromosome which is stuck to another chromosome. This attachment of one chromosome to another, called translocation, may be responsible for the appearance of mongolism in infants born to some younger mothers. When chromosome analysis reveals mongolism to be of the translocation type, the extra chromosome may have been transmitted by a normal unaffected carrier parent. In such cases, the carrier parent will be found to have what ap-

TABLE 3

CLINICAL FINDINGS IN DOWN'S SYNDROME (MONGOLISM)

Mental Retardation	Transverse Palmar Crease
Round Head	Ulnar Loops on All Fingers
Short Nose	High Axial Triradius
Epicanthic Folds	Short Crooked Fifth Finger
Conjunctivitis	Single Fifth Finger Crease
Brushfield Spots in Iris	Short Broad Hands
Upward Slope of Eyes Laterally	Arch Tibial Pattern of Foot
Enlarged Protruding Tongue	Short Neck
Fissured Tongue	Hyperflexibility
Irregular Teeth	Narrow High Palate
I-V Septal Defect	
Wide Interspace, First & Second Toes	

pears to be only 45 chromosomes, but on karyotype analysis will be found to have 46 chromosomes with one of the 21 chromosomes translocated to some other chromosome, usually a member of the 13-15 (D) group. In such cases, the expected incidence for the appearance of mongolism in subsequent siblings is greatly altered. Ordinarily, mongolism is much more frequent among children born to mothers aged 40 and over. The expected incidence among subsequent offspring is of the order of 1-4 per cent. However, when there is translocation between the 21 chromosome and one of the other autosomes, the expected incidence jumps to 33⅓ per cent. The possibilities for segregation of the translocation chromosome to form gametes and subsequent combination with the normal chromosomes from the other parent will lead to one carrier normal. one normal individual, and one mongol, since the fourth expected possibility would have only one chromosome 21 and thus be lethal.[3] This is diagrammatically illustrated in Figure 3. Therefore, knowledge of the chromosome constitution in mongol children may be most helpful in genetic counseling for family planning, particularly when younger parents are involved.[11]

CANCER AND LEUKEMIA

A specific chromosomal abnormality is associated with chronic granulocytic leukemia. The abnormality is probably the result of a deletion, or loss, of a portion of the long arms of a chromosome 21, which is an acquired abnormality involving only blood-forming cells. The finding of this abnormal chromosome, referred to as the Philadelphia 1, or Ph 1 chromosome after the laboratory of origin, can confirm the diagnosis in instances where the clinical picture is not well established.[12] Acute leukemias are often associated with

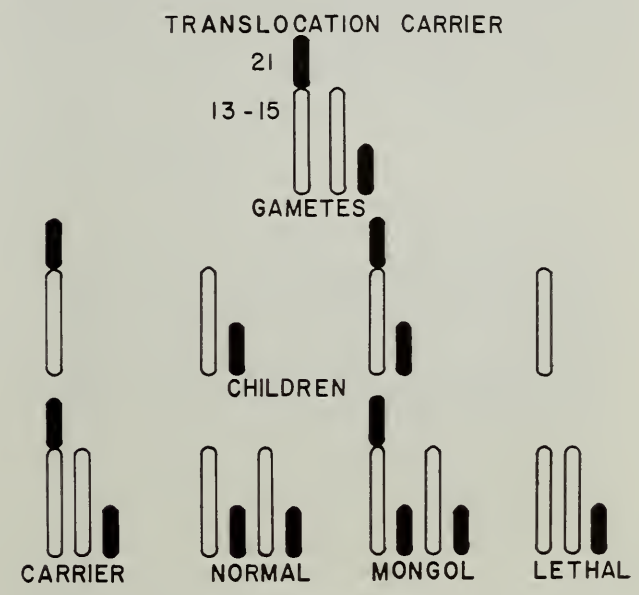


Figure 3. Expected distribution of gametes and resulting children from a normal carrier for 21 chromosome translocation.

aneuploidy, or the presence of hemopoietic cells containing abnormal chromosome numbers, but there is no consistent chromosome abnormality in this group.[13] A large chromosome apparently derived from chromosome number 2 has been reported in Waldenström's macroglobulinemia, but it is too soon to say whether this will become clinically applicable.[14] Abnormalities of chromosome number and structure have long been known to appear during the course of cancer. In selected instances, demonstration of chromosome abnormalities in cells recovered from pleural or ascitic fluid may be helpful in the diagnosis of malignancy.[15]

ABNORMALITY INCIDENCE

Although finding an individual with any given chromosomal abnormality is a rare event, the overall incidence of chromosomal abnormalities is not so rare. The incidence of mongolism is about

one in 600 live births.[11] The incidence of other chromosomal abnormalities is of the same order of magnitude.[1] Thus by combining the incidence of mongolism, 13-15 trisomy, 16-18 trisomy, Turner's syndrome, Klinefelter's syndrome, and the XXX females, we find that the overall incidence of chromosomal abnormality at birth is close to 1 per cent of the general population. Some of these abnormalities may become clinically apparent only later in life. The alert clinician will recognize most of these patients by his careful physical examination. Some will require laboratory confirmation. All stand to benefit by early recognition since proper management depends on accurate diagnosis.

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FEDERAL INTERVENTION

"And what do you think of the Medicare program?" asked the physician who was making a point of mentioning it to each patient.

"I think it's fine, doctor," the portly dowager replied. "I was on it just a week and lost 10 pounds."

Unclassified Mycobacteria in Mississippi

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Until recently, the unclassified mycobacteria were of only academic interest. The author notes, however, that 8 per cent of the tuberculosis cases in Mississippi during 1963 were attributed to the unclassified organisms, and concludes that the time is past when a smear positive for acid fast bacteria can be assumed diagnostic of M. tuberculosis. He discusses classification of these organisms and their distribution in the state.

THE PROBLEMS FACING the private physician and public health personnel in dealing with tuberculosis have undergone considerable change in recent years. As progress is made toward the goal of eradicating this disease, which today infects 15 million people in the world and accounts for 3 million deaths yearly, it is necessary to recognize the many facets of tuberculosis control. One small portion of this problem is the "atypical," "anonymous," or "unclassified"[1] mycobacteria. The "unclassified" designation is the preferred terminology, implying that in time they will achieve species designation and, hence, become classified. These organisms become more important as the number of tuberculosis cases decreases each year.

Five years ago, these unclassified mycobacteria were of only academic interest. Within the past year or so, however, the medical literature has contained more and more articles on these organisms, and most major medical meetings feature at least one paper on the subject. Private physicians ask frequently about classification, significance, and therapy. Eight per cent of the cases of tuberculosis in Mississippi during 1963 were attributed to the unclassified organisms.

Runyon[2] (Table 1) examined over 400 specimens of these organisms and presented a method of classification based on morphology, pigmentation, and behavior on artificial cultural media which has proved valuable clinically and in the laboratory.

Group I includes the Photochromogens which have been designated *Mycobacterium kansasii*. They are usually associated with severe pulmonary disease, although Wayne[3] proposes that there are two variations of *M. kansasii* with different pathogenic potential for man. Group II includes the Scotochromogens which are usually considered saprophytes although they are known to produce lymphadenitis[4, 5, 6] in children and rare pulmonary pathology.[7] Group III includes the Non-photochromogens which are the predominant variety in the Southeastern U. S. and are often called the Battey bacillus because of the study of this organism at the Battey TB Hospital in Georgia. Group IV includes the Rapid Growers which apparently do not produce classical caseating granulomatous disease. Their exact relationship to disease is not understood.

These organisms challenge the accustomed concept of tuberculosis. They differ culturally and morphologically from M. tuberculosis and will not infect guinea pigs, but produce the same type of clinical disease and pathologically[8] and radiologically the lesions are indistinguishable from those of classical tuberculosis. They are highly resistant to drugs. Epidemiologically[9] they are from all reports noncontagious, and experience with follow-up of contacts confirms this. The mode of transmission to man is not known, but most people believe it is from the environment[10] to man similar to histoplasmosis. Edwards[11] showed that two-thirds of 46,000 Navy recruits from the Southeastern United States reacted to skin tests made from the Battey antigen which further indicates that there is probably something environmental accounting for the generalized sensitivity. This also accounts for the cross reaction to PPD's.[12] It has been shown that these organisms can be recovered from healthy persons,[13] and for

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that reason many believe they are in reality "opportunistic," secondary invaders of lungs diseased from other causes, for they are frequently associated with emphysema. Treatment of these organisms is ineffective due to their poor response to the anti-tuberculous drugs. Kass[14] has had fair results with Viomycin and Ethionamide, but the only thing most authors agree on is surgery as the procedure of choice.

TABLE I

SCHEME FOR SEPARATION OF MEDICALLY SIGNIFICANT STRAINS OF UNCLASSIFIED ACID-FAST BACILLI (RUNYON)

Group I.	Photochromogens (yellow bacillus; *M. kansasii*): These strains become yellow pigmented only after exposure to light. Produces severe pulmonary disease in man; most common in northern midwest and southwestern U. S. A.
Group II.	Scotochromogens (orange bacillus): Produces yellow-orange pigment when cultured in darkness as well as in light. Aside from few isolated cases of pulmonary pathology and occasional lymphadenitis, most strains are thought not to be disease producers.
Group III.	Nonphotochromogens (Battey bacillus): This group does not form yellow or orange pigment. Common in southeastern U. S. Produces pulmonary disease which is very difficult to treat.
Group IV.	Rapid Growers: Abundant growth in a few days. Although exact relationship to disease is not understood, these strains have been isolated both from superficial and deep disease.

In Mississippi, the State Laboratory has been reporting the Battey Strain since 1959 and considered the other strains as probably contaminants or saprophytes. As the laboratory perfected better techniques and added additional procedures, additional cultures have been reported each year. In January 1961, the Tuberculosis Control Unit asked that all unclassified mycobacteria be reported in an effort to determine the state distribution, age incidence, extent of disease, and sex ratio of all the Groups. Tables II and III represent the preliminary result of this two year surveillance. Two hundred eighty separate cases have been reported from the State Laboratory, VA, State Sanatorium, University Hospital, and private laboratories, although the majority have come from the State Laboratory, which has processed 35,837 separate specimens and isolated 2,159 cultures of M. tuberculosis and 639 cultures of unclassified mycobacteria since January 1961. Five hundred fourteen were reported in 1963, and as a conse-

TABLE III

STAGE OF DISEASE CAUSED BY M. TUBERCULOSIS PRIOR TO THE ISOLATION OF UNCLASSIFIED MYCOBACTERIA

Stage	*Variety*						
	I	II	III	IV	MIXED II & III	MIXED I & II	*Total*
Minimal		13	57	1	1		72
Moderate advanced	1	9	19		1	1	31
Far advanced		15	24		1		40
Inactive		1	13				14
Extrapulmonary			1				1
Total	1	38	114	1	3	1	158

TABLE II

DISTRIBUTION OF PATIENTS ACCORDING TO AGE AND VARIETY OF UNCLASSIFIED MYCOBACTERIUM

Variety of Unclassified Mycobacterium	*Age—Decade*										(AGE NOT LISTED)	*Total*
	1	2	3	4	5	6	7	8	9	10		
Photochromogen					1							1
Scotochromogen	2	4	4	5	8	22	12	10	1	1	1	70
Nonphotochromogens	6	9	12	21	37	45	39	20	4	1	2	196
Rapid growers								2				2
Mixed (nonphotochromogens and scotochromogens)		1	1			4	2	1	1			10
Mixed (photo and nonphotochromogens)							1					1
Total	8	14	17	26	46	71	54	33	6	2	3	280

quence some cases have not been reported from local counties to TB Control. Photochromogens have been reported from two of the 82 counties (Pontotoc and Harrison); Scotochromogens from 29 counties; Nonphotochromogens from 55 counties, and Rapid Growers from two counties (Marion and Grenada).

The age of patients (Table II) varied from 2 to 99 years with 82 per cent between the fourth and eighth decade. One hundred thirty-five of the 280 cases were white and 145 nonwhite, 179 were male and 101 female. The distribution of organisms was: Photochromogens 1; Scotochromogens 70; Nonphototochromogens 196; Rapid Growers 2; Mixed (Scoto and Nonphoto) 10; Mixed (Photo and Nonphoto) 1.

As shown in Table III, 158 patients already had active or inactive cases of tuberculosis prior to the isolation of the unclassified mycobacteria. These are thought to represent "opportunistic" invaders without clinical significance at the present time, although some of the inactive cases may represent disease due to the unclassified organisms since the laboratory was not using techniques capable of detecting them over five years ago.

TABLE IV

STAGE OF DISEASE ASSOCIATED ONLY WITH UNCLASSIFIED MYCOBACTERIA

Stage	*Variety of Unclassified Mycobacteria*					
	I	II	III	IV	MIXED II & III	*Total*
Minimal		13	35	1	5	54
Moderate advanced		5	17		1	23
Far advanced		2	6			8
Respiratory nonpulmonary		11	22		1	34
Extrapulmonary		1	2			3
Total		32	82	1	7	122

Table IV shows the stage of disease that was reported by physicians in which the only organisms located so far have been unclassified mycobacteria. There were 122 cases. Certainly the 20 cases of disease attributed to Scotochromogens is questionable, but 8 of the 20 were in either the Sanatorium or VA Hospital as of Jan. 1, 1964, for evaluation and possible treatment. The Respiratory Nonpulmonary category is reserved for positive culture with a negative x-ray and is added just for statistical purposes. The 34 respiratory nonpulmonary cases to date is a smaller number than is believed to exist, for most physicians have justifiably tended to disregard single cultures as being without clinical significance, and unless these were followed up by the local health office, they would not have been reported for statistical purposes. Excluding the three Extrapulmonary cases, there were 54 cases in which there was enough radiological evidence of disease to classify these as minimal; 23 cases that were moderate advanced, and 8 cases that were far advanced. This does not mean that the unclassified organisms were the sole causative agents of their disease, but that to date only these organisms have been isolated. Forty-six of the 85 cases associated with radiological evidence of disease were nonwhite, 38 were males, and 65 were greater than 45 years of age. Other series have shown that these organisms are usually predominant in white males over 45 years of age. The number of Extrapulmonary unclassified organisms was small, only four out of 280. One was a type III recovered from a knee joint in an arrested case (Table III), one Laryngeal with 13 consecutive cultures of type II; one CNS infection with type III, and one type III eye infection.

Physicians need to be aware of this problem of disease associated with unclassified organisms. It can no longer be assumed that a smear positive for acid fast bacteria is diagnostic of M. tuberculosis. We should request drug susceptibility studies on all positive cultures. The physician has to evaluate the significance of the isolation of these organisms with each individual patient for they may be recovered from clinical specimens and be unrelated to any disease process; they may be a secondary invader of a M. tuberculosis or other chronic lung disease process, or they may be the sole etiological agent causing a disease process clinically, morphologically, and radiologically indistinguishable from M. tuberculosis, but different epidemiologically and in management. ★★★

Sunflower County Health Department

The author wishes to acknowledge the assistance of J. T. Hamrick, M.D., Supervisor, Tuberculosis Control Program, Mississippi State Board of Health.

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SEVERANCE PAY

The hospital administrator, making his daily inspection round of the institution, spotted a teen age boy lounging comfortably in the receiving dock where supplies are delivered. Believing that money shouldn't be wasted on inefficient labor, the administrator asked gruffly: "How much are you paid a week?"

"Fifteen dollars for working afternoons," the boy replied.

"Here's your pay for the week," the executive barked, handing the boy the money. "Now get lost."

Returning to his office, the administrator called his building engineer and angrily inquired: "When did we hire that boy and who's responsible?"

"We never hired him," was the response. "He delivers for the wholesale drug company."

Case Report XI of Maternal Mortality Study: Ruptured Ectopic Pregnancy

MICHAEL NEWTON, M.D.
Jackson, Mississippi

Case Report XI of MSMA's ongoing Maternal Mortality Study, concerns a 23-year-old woman, para 2, gravida 3, who was first seen six weeks after the beginning of her last normal menstrual period. Pertinent symptoms included lower abdominal pain, fainting, and vaginal bleeding. The case is reviewed by the Committee on Maternal and Child Care from the standpoint of adequacy of information and avoidable factors.

THE FOLLOWING CASE REPORT represents death from ruptured ectopic pregnancy.

CASE NO. 383-04670-63

A 23-year-old woman, para 2, gravida 3, was first seen by her physician six weeks after the beginning of her last normal menstrual period. She complained of lower abdominal pain, fainting, and vaginal bleeding for approximately one week. Her vital signs were normal. Generalized abdominal tenderness was present. The uterus was slightly enlarged and soft. No adnexal masses were palpable, but there was some pain on manipulation of the cervix. Slight uterine bleeding was present. Culdocentesis was performed, and a small amount of clear fluid obtained. The pregnancy test (male frog) was positive. The patient's hemoglobin was 8.5 gm. She was kept in the hospital under observation for six days and was given two pints of blood, antibiotics, and intramuscular progesterone. Her symptoms improved, and she was discharged.

One week later she returned to the hospital with a history of continued vaginal bleeding since discharge and a fainting spell some hours before admission. Pelvic examination was again essentially negative except for slight uterine bleeding, although the adnexa were difficult to identify because of obesity. A repeat culdocentesis was performed and no blood was obtained. Another physician was asked to see the patient in consultation, and it was decided that the most likely diagnosis was incomplete abortion. Therefore, examination under anesthesia and dilatation and curettage were performed.

The examination revealed no additional findings, but the cervix was 1 cm. dilated and the curettings were large in amount and suggestive of the products of conception. On examination under anesthesia the adnexa on both sides felt normal. Immediately following the procedure, the patient's condition was satisfactory. In the recovery room her blood pressure fell from a level of 100/60 to 80/60 and then to 50/0. She was given vasopressors and meperidine with a subsequent rise in blood pressure. Blood was ordered. She was sent back to her room two hours after the procedure. As she was moved to her bed, her pressure dropped further, and she stopped breathing. Blood, artificial respiration, and oxygen were started. The patient remained in shock. Six pints of blood were pumped in, and she was brought back to the operating room for a laparotomy under light anesthesia. At this time the abdomen was hard and distended, and there was a bluish discoloration around the umbilicus. On opening the peritoneal cavity, a large amount of blood was found which came from a ruptured ectopic pregnancy in the left tube. The patient died on the operating table before she could be brought out of shock.

This case was reviewed anonymously in the usual manner by a member of the MSMA Committee on Maternal and Child Care and discussed at a regular quarterly meeting of the committee.

Chairman, Committee on Maternal and Child Care of the Council on Medical Service.

The adequacy of the information received was rated as 4 on a scale of 1 to 5, only the report of an autopsy being missing. According to ideal standards of patient cooperation, medical knowledge, and hospital facilities, the committee felt that this death might have been avoided.

Comments by the committee covered primarily the diagnosis and management by the physician and are summarized in the following paragraphs. No avoidable factors could be attributed to the patient since she sought help when she first had difficulty, nor to the hospital since adequate facilities, including blood, appeared to have been readily available.

It is clear from the protocol that the patient had an ectopic pregnancy throughout her course, but it is not certain whether rupture occurred prior to her terminal episode. The fact that her hemoglobin rose only 0.9 gm. during her first and second admissions, in spite of two pints of blood, suggests that she may have had some leakage of blood from the pregnancy at that time. This is confirmed by her initial history of abdominal pain and fainting.

In the first instance, the committee commended the physician for his use of culdocentesis, an important diagnostic procedure in ectopic pregnancy. Often in spite of a typical history such as was presented by this patient, the findings on pelvic examination are equivocal. Moreover, early in ectopic pregnancy, the uterus tends to enlarge to a size commensurate with that expected for an intrauterine pregnancy. Sometimes, however, the suspicion of ectopic pregnancy is so great that a negative culdocentesis may be disregarded and further diagnostic procedures, such as culdoscopy, culdotomy or even exploratory laparotomy may have to be considered. In this case, since the patient's symptoms subsided, it was justifiable to consider the diagnosis of ectopic pregnancy less likely.

At the patient's second admission, her physician wisely still entertained the diagnosis of ruptured ectopic pregnancy, but another culdocentesis was negative. At this point the decision to perform a dilatation and curettage might be questioned, since, if the patient had an intact intrauterine pregnancy, such a procedure would have been disastrous. However, with the cervix dilated 1 cm., abortion probably appeared to have been inevitable, and, certainly, examination under anesthesia would have been of value. Again, at this time, no definite adnexal mass was felt. It might possibly have been wise to repeat the culdocentesis under anesthesia. Certainly, if ectopic pregnancy was still suspected, culdotomy or laparotomy should have been considered.

The most important part of this patient's course relates to her postoperative condition. It is apparent that her hypotension was attributed to reaction to anesthesia or some other obscure cause. However, the primary cause of postoperative hypotension is likely to be hemorrhage. In this case, perforation of the uterus or some other type of intraperitoneal bleeding was a good possibility. Failure to recognize this led to a definite delay in treating the patient. Subsequently, when the patient was in shock and had had respiratory arrest, active measures of transfusion and resuscitation were started. The patient was given six pints of blood before exploratory laparotomy was performed. The attempt to restore blood volume may have involved some delay. The urgent problem under these circumstances is to control the bleeding and, as soon as blood has been obtained and is being transfused rapidly, laparotomy should be undertaken promptly. Had this been done, the patient might have been saved. It was interesting to observe the development of bluish discoloration of the skin, Cullen's sign. This is rare and is indicative of the presence of a large amount of blood inside the peritoneal cavity.

SUMMARY

1. A case of maternal death due to hemorrhage from ruptured ectopic pregnancy has been presented by the Committee on Maternal and Child Care of the Mississippi State Medical Association.

2. The necessity of keeping the possibility of ectopic pregnancy in mind, the use of culdocentesis in diagnosis, and the importance of prompt laparotomy with blood being transfused rapidly are emphasized. ★★★

2500 North State St.

Clinicopathological Conference LXII

Conducted by the Department of Pathology
Mercy Hospital-Street Clinic
Vicksburg, Mississippi

THIS 72-YEAR-OLD COLORED MALE was admitted to Mercy Hospital on Dec. 6, 1965, with a chief complaint of abdominal discomfort with bloating, generalized weakness, swelling of the feet, and right cervical and bilateral inguinal lymphadenopathy. The patient stated that he had not been feeling well for over one year, during which time he had noted progressive shortness of breath on exertion, a sense of fullness in his abdomen, and dependent edema. He was seen in the Street Clinic on April 8, 1964, and a diagnosis was made of chronic rheumatic heart disease with arteriosclerosis and mild congestive heart failure. This patient's previous history had been microfilmed and was not available at this time. He was treated on diuretics, digitalis, and low salt diet, and followed on several occasions and thought to be improving.

Later, when the microfilmed record was obtained, his past history revealed his first admission

In CPC LXII the staff of the Street Clinic discusses the case of a 72-year old colored male with abdominal discomfort and bloating, generalized weakness, swelling of the feet, and right cervical and bilateral inguinal lymphadenopathy.

Participants are Drs. T. B. Dominick, R. H. Fenstermacher, and L. J. Clark, Jr.



Figure 1

was in July 1952, at which time he was admitted for indigestion of five months' duration with a 15 pound weight loss. There was a questionable mass in the right upper quadrant and an upper G. I. series revealed hypomotility of the proximal two-thirds of the small bowel. Chest x-ray showed a small effusion at the right base with pleural thickening. His course in the hospital was febrile with temperature ranging from 99 to 101.6° nightly. The possibility of an amebic abscess of the liver was considered; however, positive identification of *Endamoeba histolytica* was never proven. The patient was given a course of emetine and later carbosone with improvement and clearing of the fever.

The second admission was in April 1953, when he came in with swelling of the left upper arm of one month's duration. There were numerous nodes in the left supraclavicular area and a cystic appearing mass over the left anterior humerus. Straw-colored fluid was aspirated from this cyst. A left cervical node biopsy revealed sarcoidosis. X-ray of the left humerus revealed small areas of destruction with osteoporosis of the left shaft. Chest x-ray showed improvement over an interval

of eight months with general pleural thickening on the right. The patient was given a course of TEM (triethylene melamine) and discharged as improved.

The third admission was in November 1953, when he presented with a draining sinus of the left arm and recurrence of the cystic mass. Aspiration at this time revealed a purulent material which cultured *Staphylococcus aureus.* Cultures for tuberculosis and skin tests were negative. He was treated with oxytetracycline, and the cystic mass was packed and irrigated with Varidase. A repeat x-ray of the left humerus revealed no change in the destructive process. Apparently the patient had an uneventful recovery and he was lost to follow-up until April 1964.

Physical examination on this admission revealed a well-developed and well-nourished elderly colored male who appeared chronically ill. Pertinent physical findings revealed an old scar over the left anterior upper arm measuring approximately six inches with loss of deltoid musculature. There was a large 2 x 2 cm. firm right cervical node and bilateral firm matted nodes in both inguinal areas. Examination of the chest revealed the heart to be clinically enlarged with minimal crepitant rales in the left base. There was a grade II/IV apical systolic blowing murmur with radiation into the left axilla.

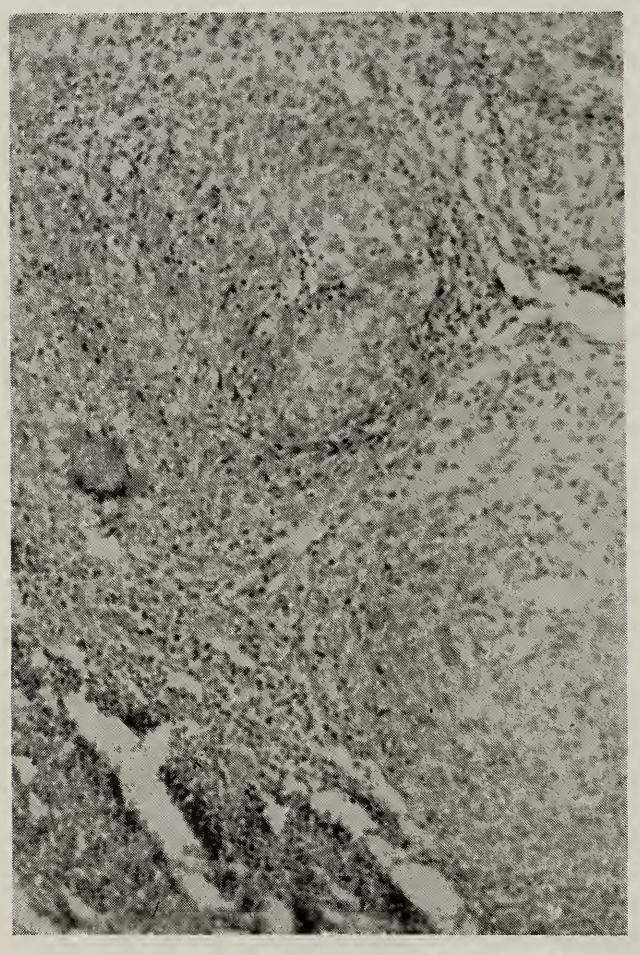


Figure 2. Sarcoidosis of cervical lymph node.

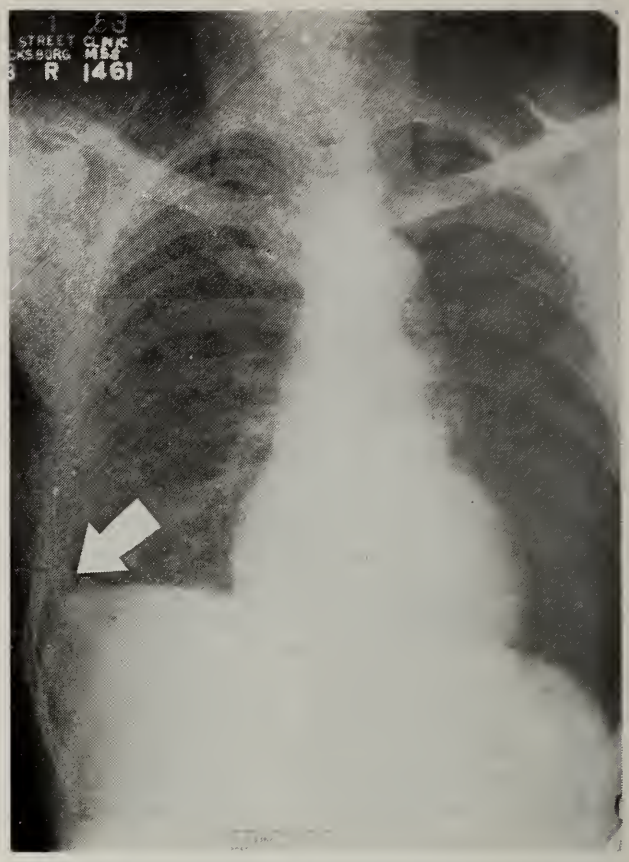


Figure 3. Pleural changes noted at right base.

The abdomen was protuberant and tympanitic. The liver was enlarged, approximately two finger breadths below the right costal margin, and there was a feeling of fullness in the epigastrium. There was a three-plus pretibial and ankle pitting edema. Blood pressure was 90/60. The pulse was 65 and weak.

Complete blood count revealed a hemoglobin of 13.1 gm.; hematocrit 44 per cent; WBC 6,400, and a normal differential. Urinalysis showed a specific gravity of 1.019 with a trace of albumin and many hyaline and finely granular casts. Urea nitrogen was 76 mg. per cent, direct Bilirubin of 0.7 with a total of 1.63 mg. per cent; alkaline phosphatase was 4.3 Bodansky units; uric acid was 15.3 mg. per cent, and cholesterol was 172 mg. per cent.

The electrocardiogram showed atrioventricular dissociation with a wandering pacemaker. In addition, there was a probable old anterior myocardial infarction. Chest x-ray was not done, as the patient stated he had had a recent portable one through the Mississippi State Board of Health and

had not been notified of its results. Upper G. I. series was within normal limits except for the possibility of slight extrinsic pressure on the superior surface of the duodenal bulb. The patient was taken off the digitalis at this time because of the possibility of toxicity.

On Dec. 8, 1964, a right cervical node biopsy was done under local anesthesia. The pathological report revealed extensive hyaline deposition which was positive on Congo red stain, and the diagnosis of amyloidosis was made. The course in the hospital was one of gradual deterioration and the patient expired ten days after admission.

X-RAY DATA

Dr. T. B. Dominick: "An examination of the chest made on April 1, 1953, revealed considerable pleural thickening and reaction along the lower one-half of the right thorax resulting in thickening and blunting of the costophrenic angle and also flattening of the diaphragm. There was also minimal clouding of the lower portion of the right lung. There was no evidence of any significant hilar or perihilar enlargement. The cardiac shadow was prominent both to the right and left but was considered to be within the extreme upper

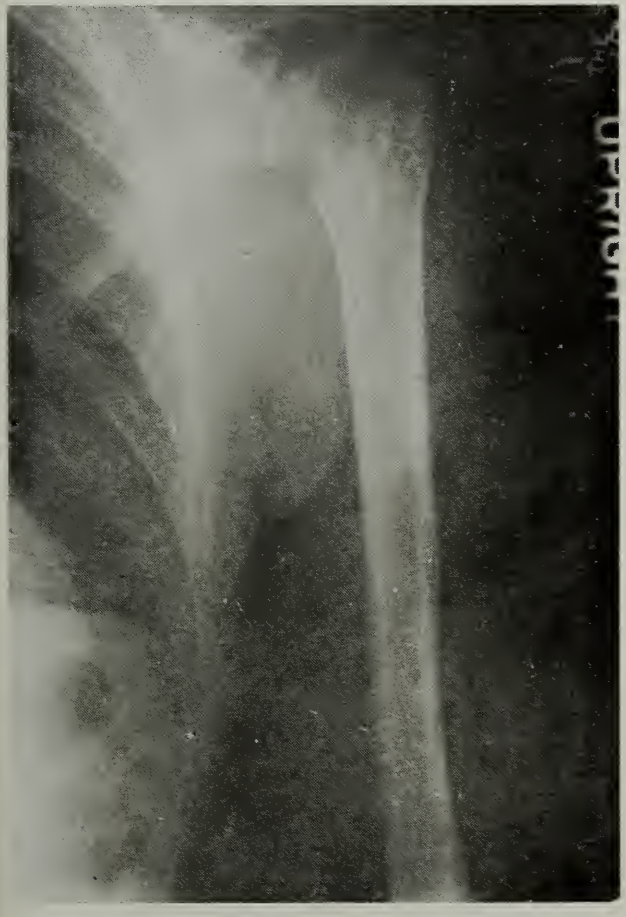


Figure 4. Left shoulder showing large destructive process of head and neck of humerus.

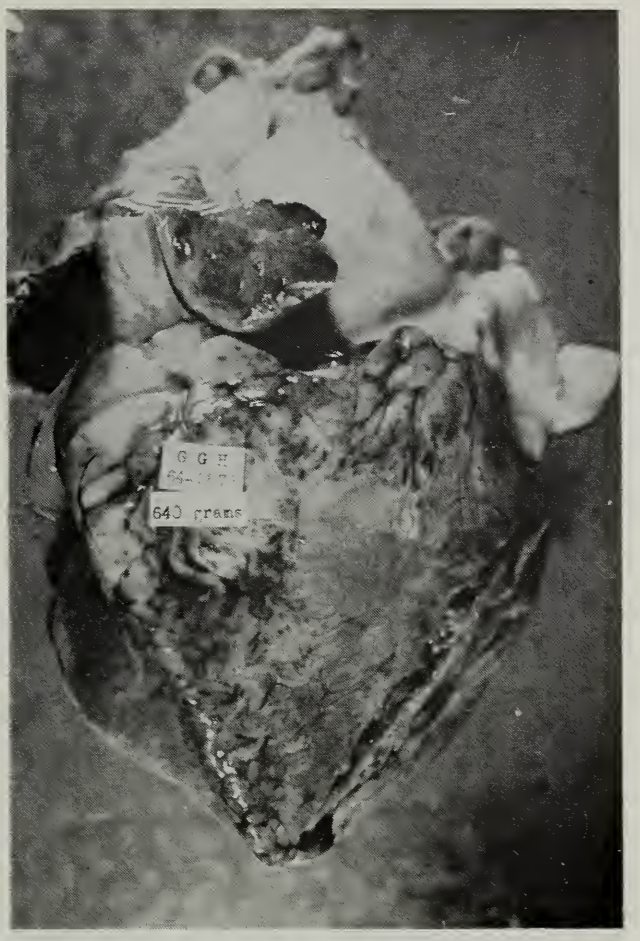


Figure 5

limits of normal for an individual of this height and weight. There was no evidence of any bony destruction in the ribs, and it was felt that the changes were more indicative of an exudative pleurisy rather than a simple effusion.

"A study of the left shoulder area revealed cystic and punched out changes involving the head and neck of the humerus. No periosteal reaction was evident, but there was some indication of soft tissue swelling. In view of the patient's medical history and the clinical findings, it was felt that the lesion in the left shoulder was a part of the systemic disease, sarcoidosis."

AUTOPSY FINDINGS

Dr. R. H. Fenstermacher: "At autopsy there was cervical and inguinal lymphadenopathy with nodes measuring up to 1.5 cm. in diameter. Petechial hemorrhages were present in the oral mucosa. The tongue was of normal size and did not appear to be indurated or nodular. There was moderate ankle edema, bilaterally. The peritoneal cavity contained 500 cc. of reddish-pink thin fluid. Both pleural spaces were obliterated by dense fibrous adhesions. Some adhesions were also present in the pericardium, and the pericardial sac



Figure 6

contained 25 cc. of bloody fluid. The heart was enlarged and weighed 640 gm. There was hypertrophy of the entire heart and pronounced dilatation of the right heart. Numerous petechial hemorrhages covered the pericardial surfaces. Coiled clots were present in the left auricular appendage. The heart muscle appeared pale and grayish-pink in color, and the myocardium cut with a peculiar gritty feel almost like cutting very firm butter. Coronary sclerosis was moderate with fairly pronounced sclerosis in the anterior descending branch of the left coronary, but there was no evidence of occlusion or thrombosis. Both lungs were firm in consistency and weighed 800 and 450 gm. respectively. Many enlarged and moderately anthracotic hilar lymph nodes were present. Cut section showed diffuse fibrosis involving all lobes of both lungs.

"The liver weighed 1420 gm., and cut section showed a mottled yellowish-brown and yellowish-gray parenchyma. The kidneys weighed 120 and 130 gm. respectively and, aside from decrease in cortical thickness and pitting, showed no gross abnormalities. Esophageal ulceration was present in the lower third, and there was a small leiomyoma in the cardia of the stomach. Enlarged lymph nodes ranging up to 2.5 cm. in diameter were present in the peripancreatic tissues, particularly around the head of the pancreas, and also retroperitoneally around the aorta. These enlarged lymph nodes extended down to the bifurcation of the iliac arteries. Cut surfaces of these lymph nodes presented a peculiar grayish-white, waxy appearance.

"A drop of Congo red stain was applied to the cut surface of one of these enlarged peripancreatic lymph nodes, and this stain was immediately absorbed into the tissue producing a brilliant red appearance. This discoloration was maintained despite vigorous attempts to remove the stain with running water. Microscopically, extremely large deposits of amyloid were demonstrated in the lymph nodes. All of the enlarged lymph nodes showed this smooth waxy amyloid replacing much of the lymphoid parenchyma and occurring in large globules and sheets throughout the nodes. On routine hematoxylin and eosin stain this amyloid had a homogenous glassy hyaline appearance. Congo red and methyl violet stains were also strongly positive for amyloid. Sections of the heart muscle showed this waxy material encircling and replacing the myocardial fibers and surrounding blood vessels in focal deposits. Hepatic amyloid was demonstrated between the liver parenchymal and lining cells of the liver sinusoids. Focal deposits of amyloid were present in the spleen and adrenal glands. Microscopic study of oral tissues including the tongue revealed no amyloid, as did study of the kidney. Examination of multiple sections of kidney showed relatively normal glomeruli except for slight to moderate arterionephrosclerosis. Small amounts of amyloid were detected beneath the mucosa of the esophagus but could not be found elsewhere in the gastrointestinal tract. Both lungs showed extensive interstitial pulmo-

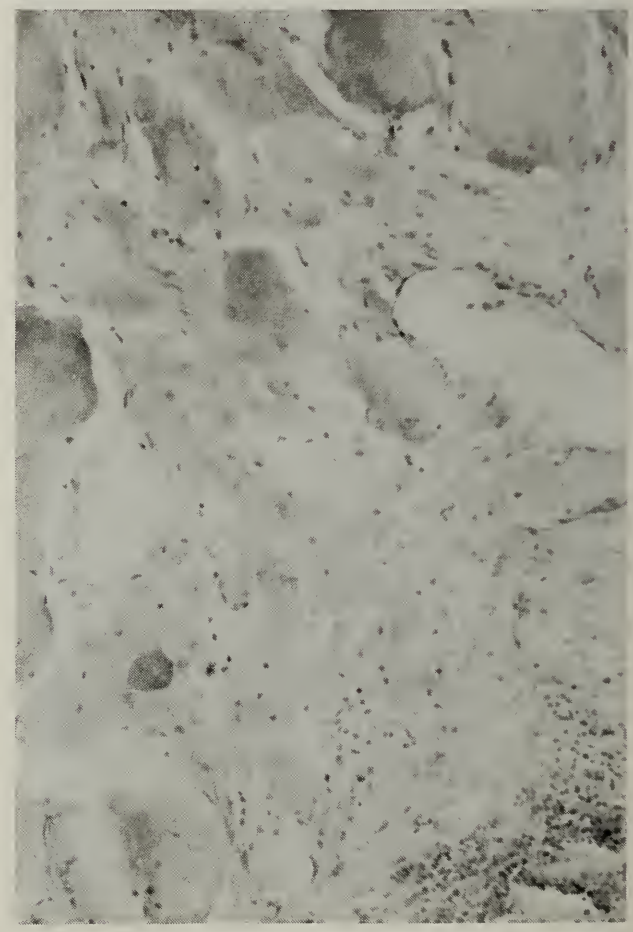


Figure 7. Amyloid in lymph node.



Figure 8. Amyloid in myocardium.

nary fibrosis. No lesions of sarcoid were demonstrable, and there were no other granulomas. Occasional arteries and arterioles showed small periarterial amyloid deposits. The thyroid, pancreas, and bone marrow were negative for amyloid.

"Gross and microscopic findings are indicative of amyloidosis involving lymph nodes, heart, liver, spleen, adrenal glands, esophagus, and lungs with death probably due to cardiac arrhythmia as a result of extensive and diffuse myocardial amyloid infiltration. No residual lesions of sarcoidosis were demonstrable, but the possibility of a healed pulmonary sarcoidosis resulting in the pronounced interstitial fibrosis of the lungs must be entertained. The possibility of healing lymph node sarcoidosis eventuating in hyalinosis or paramyloid should also be considered."

DISCUSSION

Dr. L. J. Clark, Jr.: "Amyloidosis is characterized by variable local and general depositions of an unknown intercellular substance related to protein metabolism, the nature of which appears to be nonspecific. Because of its variability in distribution irregularly through various organs, a wide variety of clinical manifestations may be present. On the basis of its staining ability and organ distribution a working classification of amyloidosis is as follows:

"1. PRIMARY or 'atypical' amyloidosis. These infiltrates are often not metachromatic and have any or little of the Congo red as shown in secondary amyloid. These deposits occur most commonly in the tongue, gastrointestinal tract, heart and blood vessels, peripheral nerves, skin, periarticular tissues, and carpal ligaments.

"2. SECONDARY or 'typical' amyloidosis. In contrast to primary amyloidosis there is positive staining with Congo red and metachromatic dyes. This is most frequently associated with chronic inflammation of suppuration such as, tuberculosis, osteomyelitis, rheumatoid arthritis, ulcerative colitis, pyelonephritis, and lymphoma. Deposition of amyloid substance occurs predominately in liver, kidneys, spleen, adrenal, and thyroid glands.

"3. AMYLOIDOSIS ASSOCIATED with MULTIPLE MYELOMA (paramyloidosis). The staining and distribution are similar to that seen in the primary type.

"4. LOCALIZED or 'tumor-forming.' The focal deposits assume the staining proprieties sim-

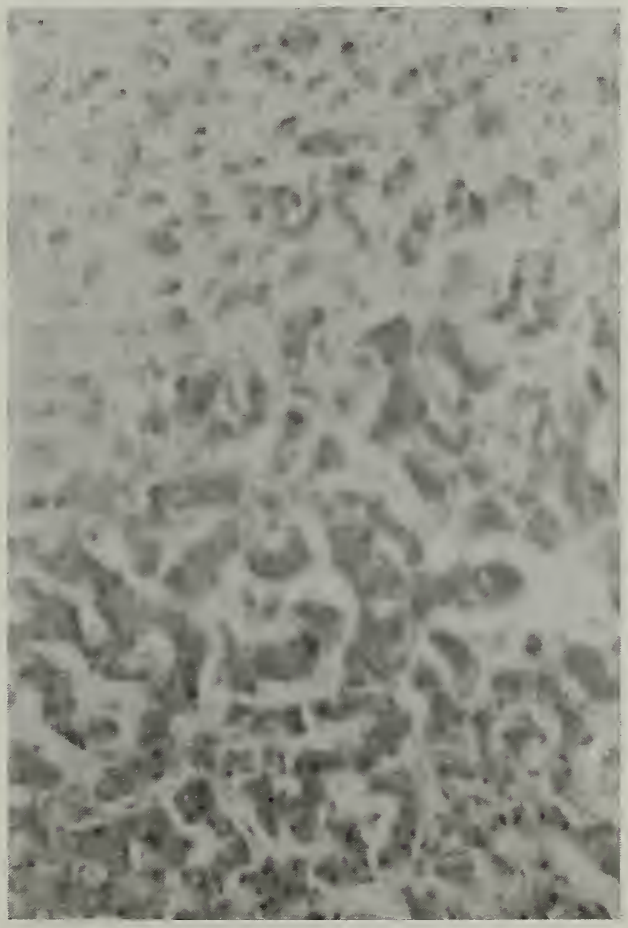


Figure 9. Amyloid in liver.

ilar to the primary disease and are found predominately in the larynx, trachea, mediastinum, bronchi, heart, and skin. This form of amyloidosis occurs preponderantly in males.

"The theories of the pathogenesis of amyloidosis include disturbances in general of local protein metabolism, and antigen-antibotic reaction with precipitation in tissues, a primary abnormality resembling neoplasia in the reticulo-endothelial system, a direct relationship to hyperglobulinemia with amyloid as a possible intermediary and abnormal form of gamma globulin, and the concepts that amyloidosis may be a degenerative disease which promotes the formation of pathologic ground substance.

"It appears that there is considerable overlapping of the areas designated in this empirical classification of amyloid disease. Patients with 'primary amyloidosis' and with 'paramyloid' frequently have involvements of kidneys, spleen, and liver, and/or characteristics of Congo red and crystal violet. Occasionally patients with secondary amyloidosis have exhibited widespread blood vessel involvement and/or absence of characteristic staining reaction. Amyloidosis has been induced in experimental animals, particularly mice and rabbits, by serial injections of a number of substances, particularly sodium caseinate, nucleic acids, and bacterial antigens. Histochemical and structural studies as noted by light and electron microscopy of experimentally induced amyloid have shown no specific differences from amyloid in the human. Under the electron microscope, the studies indicate that amyloid contains fibrils which appear to be different from collagen and other known fibers of the body.

"It is interesting to note that although the original description of amyloid was given nearly 100 years ago by Rokitansky and Virchow, the pathogenesis of amyloidosis is still poorly understood.

"In this patient the admission diagnoses of lymphoma, metastatic disease, and Boeck's sarcoid was considered. The diagnosis of amyloidosis came as quite a surprise. We were again enlightened when review of the old microfilm records showed the diagnosis of active Boeck's sarcoid approximately 11 years prior to this admission. The patient apparently had active sarcoid with involvement of the liver and pleura of the lungs. The subsequent admissions were complicated with a cystic and suppurative abscesses of the left upper arm. If this was an osteomyelitis of the left humerus, the infection apparently healed as he was lost to follow-up examinations following his course of antibiotics and open drainage.

"His last admission was for diagnosis of what appeared to be a terminal illness. The cardiac manifestations were that of congestive failure which in part may have been due to cor pulmonale secondary to involvement of pulmonary vasculature with amyloid. The primary disorder of the heart was thought to be due to amyloid deposition in myocardial and pericardial tissues which could have caused the AV dissociation and wandering pacemaker as seen on the electrocardiogram. The liver involvement is usually manifested by hepatomegaly usually unaccompanied by jaundice. Death from hepatic insufficiency with amyloid infiltration is reported to be rare.

"The involvement of the gastrointestinal tract is frequently manifested by dysphagia and by decreased motility by x-ray. The stomach is more frequently involved with the symptoms suggestive of a duodenal ulcer or gastric neoplasm. Our gastrointestinal x-ray was essentially negative and showed normal motility. The other area of involvement which was considered in this patient was that of the kidneys. The patient was azotemic and with traces of albumin noted. Unfortunately, a complete laboratory work-up was not done prior to his death. Serum electrophoretic studies, bone marrow aspiration, and Bence-Jones protein should have been done. Fortunately, we have the complete autopsy findings to rule out other diseases. It is interesting that no trace of amyloid was found in the kidneys of this patient.

"We recently had a patient who presented with the nephrotic syndrome who underwent a renal biopsy at University Hospital and was found to have renal amyloidosis. I was later informed that her amyloidosis was thought to be of the primary type and that the renal tissues was positive for Congo red.

"In reviewing the literature, a case of Boeck's sarcoid with paramyloidosis was reported in the American Journal of Pathology in 1948.[1] The author considers a definite phase of the development of the lesions of paramyloidosis to be associated with an allergic hyperglobulianosis in the reticulo-endothelial system as the underlying primary cause.

"Our patient would appear to fall into the classification of secondary amyloidosis with primary involvement of heart, lymph nodes, liver, spleen, esophagus, adrenal glands, and lungs, which could have been caused by a previous chronic inflammatory or suppurative process occurring with his prior illness." ★★★

100 McAuley Dr.

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Radiologic Seminar XXXV: Reduction of Ileo-Colic Intussusception

ROBERT D. SLOAN, M.D.
Jackson, Mississippi

One ordinarily thinks of a barium enema as a diagnostic rather than a therapeutic procedure, but in infantile ileocolic intussusception this is in general the initial and preferable form of therapy.

Intussusception most commonly develops between the ages of four and ten months, with 85 per cent of the cases occurring under the age of two years. Males are more frequently affected than females. In the adult, intussusception is usually secondary to some specific abnormality, such as a Meckel's diverticulum or a neoplasm, but in the childhood type, a discernible etiology is detected in only about 5 per cent of the cases. The ileocolic type of intussusception occurs most frequently (approximately 80 per cent) with the ileo-ileocolic type being the next most common situation encountered.

It is not proposed at this time to discuss the signs, symptoms, or physical findings in the usual infantile intussusception, but rather to present the preferable course of action once the suspicion of this entity is entertained clinically.

In such instances a barium enema becomes an emergency procedure, both to confirm the diagnosis and to attempt a complete reduction of the intussusception. Prior to the barium enema the surgical staff and operating room should be alerted to the fact that their services may be needed if an intussusception is found and incompletely reduced, and the child should be started on supportive fluids. The stomach should be emptied and a gastric tube left in place. In the fluoroscopic room an ungreased Foley-bag catheter is inserted into the rectum and inflated fully. The buttocks are strapped tightly together with adhesive to help prevent leakage of the barium. The catheter is connected to the barium container and the latter elevated three to three and a half feet above the table top. It is important that this distance not be exceeded.

The barium is then allowed to flow freely into the colon with fluoroscopic monitoring. There is usually rapid filling until the intussusception is reached, at which time a meniscus-like pattern is



Figure 1. A spot film from a barium enema study on an infant with an ileocolic intussusception, at the time when the head of the barium column first reached the intussusception in the region of the hepatic flexure. Note the filling defect and meniscus-like pattern. (Retouched for purposes of illustration.)

Sponsored by the Mississippi Radiological Society.
From the Department of Radiology, University of Mississippi Medical Center.

formed (Figure 1). The barium may seep between the intussusception and the intussuscipiens, producing a coiled-spring appearance (Figure 2). Reduction of the intussusception may take place smoothly and rapidly, but more commonly it occurs in an intermittent manner. It is important that the column of barium exert a steady hydrostatic pressure, and excessive leakage of the barium



Figure 2. A spot film obtained a few minutes later, as reduction of intussusception began to take place. The coiled-spring appearance is quite apparent. (Retouched for purposes of illustration.)

from the anus or a plug of thick barium in the tubing may cause loss of this pressure.

If the system is functioning properly and satisfactory reduction taking place, the intussusception will eventually migrate back into the cecal area. The essential radiologic criteria for complete reduction is the obvious retrograde filling of multiple loops of terminal ileum (Figure 3). If apparently complete reduction has taken place, powdered charcoal is placed into the stomach through the previously placed tube, and the infant admitted to the ward for observation. The charcoal should appear in the stool within 24 hours or less, and if spontaneous bowel movements do not occur, a water enema may be given to detect its presence.

In large series a satisfactory and complete reduction of the intussusception has been accomplished approximately 70 per cent of the time. It should be apparent that a trained radiologist, ex-

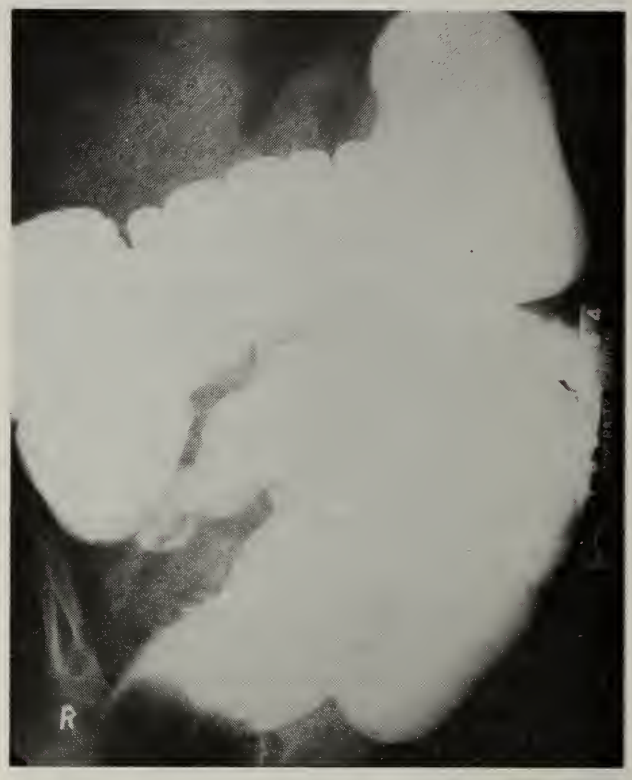


Figure 3. One of the routine post fluoroscopy films at the completion of the study, demonstrating complete filling of the cecum and terminal ileum with barium, the essential radiologic requirement for complete reduction.

perienced in the technique and its limitations, is essential for such a figure to be reached.

If, at the completion of the barium enema, the reduction has obviously been incomplete or there is any real question of this point, a prompt laparotomy is indicated. Also, if after apparently complete reduction, the clinical course is not satisfactory or there is an apparent recurrence of the intussusception, surgery is indicated.

One of the commonly raised objections to this technique is the fear that gangrenous bowel may be reduced or perforated. Experimental studies have shown, however, that a gangrenous intussusception cannot be reduced or the colon perforated with the barium container not exceeding a distance of three and a half feet above the table top. Another objection is that a jejuno-ileal or ileal-ileal intussusception component may be missed on barium enema, but this situation is uncommon and observation of the patient's clinical

status post barium enema should make it apparent that pathology is still present. An occasional Meckel's diverticulum or polyp, as the leading point of an intussusception, will be missed with this technique, but as stated earlier in only 5 per cent of the cases of infantile intussusception is such discernible pathology present.

In summary, therefore, it is felt that a therapeutic barium enema is the inital treatment of choice in infantile ileocolic intussusception, provided adequate radiologic facilities are available.

2500 North State St.

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THIMK

The head of a large clinic, a sort of self-styled efficiency expert, purchased a number of signs reading Do It Now. Asked by a colleague how his program for stimulating employees of the clinic was working out, he sadly replied:

"It was a flop. The business manager absconded with $800, the lab technologist eloped with my secretary, and three of the nurses asked for a raise."



The President Speaking

'Controlling the Thrill Pills'

OMAR SIMMONS, M.D.
Newton, Mississippi

THE MOUNTING ABUSE of amphetamines and barbiturates, especially among young thrill seekers, makes it almost an even bet that the Congress will enact some form of control measure this year. Two such bills are pending now, H.R. 2 in the House of Representatives and S.348 in the Senate. Hearings have been conducted on the former during which AMA and the Pharmaceutical Manufacturers Association offered support to the measure with minor but important reservations.

The pending legislation is so written as to extend controls well beyond the amphetamines and barbiturates by defining a proposed jurisdictional area over "depressant and stimulant drugs." Both AMA and PMA properly objected to this broad and loose wording, pointing out that the relevant matter at hand is the concern over the two families of drugs specified.

More than any other segment of society, physicians recognize and appreciate fully the problems of drug abuse and misuse. From a medical viewpoint it is important to keep three key considerations in mind when seeking legislation on drug control:

—First, the amphetamines and barbiturates are useful, proven therapeutic tools in the profession's armamentarium. Any controls instituted by legislation should be carefully designed to discourage misuse, not to hamper or harass the use of drugs by the physician.

—Second, it must be understood and appreciated that any drug can be abused and misused with the almost invariable result of harm and injury to the individual.

—Third, controls over ethical pharmaceutical manufacturers and reliable, ethical distribution organizations alone exercise virtually no effect upon illicit sources of supply and drug counterfeiting. Elimination of these unlawful activities is more important than clamping down on those who are already exerting maximum voluntary self-policing.

All of which is to say that controlling the thrill pills entails considerably more than writing into law a series of restrictions upon the ethical manufacture, distribution, and use of these drugs. ★★★

JOURNAL OF THE
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EDITORIALS

Esophageal Hiatal Hernia

HERNIATION OF THE FUNDUS of the stomach through the esophageal hiatus is the second most frequent finding in patients undergoing x-ray study of the upper gastrointestinal tract. The incidence ranges from 9 per cent to as high as 33 per cent in elderly patients. It occurs twice as often in females as males and most frequently, after age 50.

Many of these hernias are asymptomatic and are incidental findings on x-ray examination. Still others are easily controlled by medical treatment and do not require surgical intervention.

The indications for surgical treatment of hiatal hernia include intractable pain, peptic esophagitis, esophageal ulcer and stricture, and chronic or acute hemorrhage from ulcerative esophagitis. All of these symptoms are caused by the retention or regurgitation of acid-pepsin gastric juice from the stomach.

For many years, most surgeons preferred to repair the esophageal hiatus by the transthoracic approach. Although this method gave excellent exposure of the hernia, it had the disadvantage of greater postoperative incisional pain and did not allow exploration of the upper abdomen unless a large incision was made in the diaphragm.

The present trend is to use the abdominal approach to the esophageal hiatus. The hernia can be adequately repaired from below. There is less postoperative pain and morbidity, but most important, it allows exploration of the abdominal viscera and the performance of ancillary procedures if indicated. Many of the patients with hiatal hernia may also have hyperacidity, duodenal ulceration, with or without pyloric obstruction, and even gallbladder disease.

Since most of the symptoms of esophageal hiatal hernia are due to peptic esophagitis or ulceration, the present trend is to combine the hiatal hernial repair with bilateral vagotomy and pyloroplasty. This not only reduces the gastric acidity, but prevents regurgitation of the gastric content into the lower esophagus.

The present mortality rate for repair of an esophageal hiatal hernia is approximately 1 per cent. The recurrence rate is less than 4 per cent. Any patient having distressing symptoms from a hiatal hernia which are not easily controlled by medical management can now seek surgical relief with confidence and safety.—G.H.M.

Nurse Education: The Trend Is Up

Perhaps no education program in the allied health professions has been discussed and debated as extensively as nurse training. Since 1949, the number of schools of nursing in Mississippi has decreased to 11 from a former total of 22. Nearly every regular session of the legislature considers a hopperful of bills on nurse licensure, practice, and education.

But there is another side of the coin, and a recent announcement by the Board of Trustees of Institutions of Higher Learning reflects it. All 11 schools of nursing in Mississippi are accredited for 1965. There are today more students enrolled in these institutions than there were in 22 schools a decade and a half ago. As of September 1964, 628 students were pursuing nurse training against 520 in twice as many schools in 1949. Faculties are described as highly competent, and didactic work has been upgraded concomitantly with clinical training in new and modern physical facilities. Graduates who attain a specified score on the Mississippi state board examination are eligible for licensure by reciprocity in other states.

Five of the training institutions are hospital diploma schools, each with a three year curriculum. They include the Methodist Hospital at Hattiesburg, the Baptist and St. Dominic hospitals at Jackson, the Matty Hersee Hospital at Meridian, and the Mercy Hospital-Street Memorial at Vicksburg.

The five associate degree programs with two year training courses are usually established as an integral part of a junior college or university. Among these are the Northeast Mississippi Junior College at Booneville, the Jones County Junior College at Ellisville, the Mississippi Delta Junior College at Moorhead, the University of Southern Mississippi resident center at Natchez, and the Perkinston Junior College at Perkinston.

The University of Mississippi School of Medicine's baccalaureate degree program rounds out the 11th training source. Three new associate degree programs will become fully operational and accredited in 1965 with enrollment of beginning classes, bringing the total to 14 schools.

More than 125 nurses, each eligible for state examination for licensure as registered nurses, are being graduated annually, and the college board hopes to see this number almost doubled in the next decade. The depth of quality in the several curricula and the consistent gains in enrollment and graduation totals are encouraging signs in this important area of medical service.—R.B.K.

Instant Scientific Programs For the Asking

The hard pressed, busy program chairman for the local medical society may be overlooking one of the richest—and most easily obtained—sources of scientific presentations. The American Medical Association's film library ships almost 11,000 motion pictures on loan each year to medical societies and educational institutions. All but one of the nation's 88 accredited medical schools make extensive use of the modern, upgraded medical movies.

AMA-supplied films offer springboards for discussion at small medical meetings. They are useful in supplementing and amplifying a scientific paper. Journal clubs, small hospital staff groups, and specialty societies are finding new uses for these films.

While service by the library on supplying a film is limited or delayed only by its availability, those ordering medical motion pictures can be better assured of receiving their first choice if they can anticipate their need 30 days in advance. A letter or telephone call to the Chicago headquarters is all that's necessary to bring new horizons to small local meetings.—R.B.K.

LETTERS

SIRS: Many thanks for the magnificent issue of your JOURNAL devoted to narcotic addiction (Vol. VI, No. 1, Jan., 1965) and for Dr. Head's fine paper on mental illness and retardation. The final spade work in the field of emotional disease must be done at the local level, and it is more than a little gratifying to me to see how quickly and thoroughly you people have taken hold.

LINDSAY E. BEATON, M.D.
VICE CHAIRMAN, COUNCIL ON MENTAL HEALTH
AMERICAN MEDICAL ASSOCIATION
TUCSON, ARIZONA

Book Reviews

Scintillation Scanning in Clinical Medicine: Based on a Symposium Sponsored by the Department of Radiology of the Bowman Grey School of Medicine. Edited by James L. Quinn, III, M.D. 278 pages with illustrations. Philadelphia: W. B. Saunders Company, 1964. $11.50.

This most recent compilation of papers from a Symposium on Radioisotope scanning brings the art and science of body organ scanning up to date and presents an interesting glimpse into the future of scanning.

Dr. Quinn assembled 25 of the nation's recognized authorities in the field of nuclear medicine and particularly in scanning to provide a major addition to the small number of bound volumes dealing with the subject. Although the book is not a primer for readers making their initial approach to scanning, many basic concepts in the techniques and principles of scanning are well presented. Each article is bountifully illustrated with high quality photographic reproductions of scans, and also there is an extensive bibliographic assemblage.

This book should prove of current interest and future reference value for workers in the field of clinical radioisotope scanning.

JACK K. GOODRICH, M.D.

Christopher's Textbook of Surgery. Eighth Edition. Edited by Loyal Davis, M.D., Professor of Surgery, Northwestern University Medical School. 1481 pages. Philadelphia: W. B. Saunders Company, 1964. $18.50.

The eighth edition of this excellent volume again represents one of the best surgical texts available. The total size of the book has been reduced by 70 pages, but the actual content has been improved upon by reducing duplication of subject matter.

The material covered in each chapter has been brought up to date by an authoritative author. Every chapter including a new one, "Horizons in Surgery" by Dr. Thomas E. Starzl, is easily readable. At the end of each chapter there is an excellent list of reading references.

The entire surgical field is covered. There is a chapter on each of the following subjects: The History of Surgery, The Wound and Its Care, Infections, Shock, Principles of Preoperative and Postoperative Care, Surgical Metabolism and Electrolyte Balance, Anesthesiology, Thermal and Radiation Injuries, The Head, The Neck, The Thyroid and Parathyroid Glands, The Breasts, The Thorax, Pleura and Lungs, The Heart, Great Vessels and Pericardium, The Abdominal Wall and Peritoneum, Hernia, The Alimentary Canal, The Liver and Biliary System, The Pancreas, The Adrenal Glands, The Spleen, The Urinary System, The Male Reproductive System, The Female Reproductive System, The Musculoskeletal System, The Hand, The Foot, Physical Medicine and Rehabilitation, The Vascular System, The Nervous System, The Qualifications of a Surgeon, Surgical Judgment, and Horizons in Surgery.

This volume will be a favorite text for the medical student and resident and anyone interested in the broad field of surgery.

J. F. LUCAS, M.D.

ACOG Publishes Revised Manual

The Second Edition of the *Manual of Standards in Obstetric-Gynecologic Practice* was published March 1 by The American College of Obstetricians and Gynecologists. The manual is more comprehensive and three times greater in volume than its predecessor, the First Edition, which was published in 1959.

Compiled by the College's Committee on Professional Standards, with the cooperation of the Standards Committee of the American Association for Maternal and Child Health, numerous Fellows of the College, and other physicians, the Manual is designed for physicians, nurses, hospital administrators, and other personnel as a guide in providing proper facilities and good quality care for obstetric and gynecologic patients.

The Manual will be distributed gratis to all Fellows and Junior Fellows early in March. Cost to nonfellows is $2.50 per copy with a 10 per cent discount on orders of 25 copies or more. Orders, accompanied by check or money order, are now being accepted by the College, 79 West Monroe, Chicago, Ill. 60603.

PERSONALS

MARSHALL B. ALLEN, JR., of Jackson has been appointed professor of surgery (neurosurgery) and chief of Neurosurgical Service of the Medical College of Georgia and of the Eugene Talmadge Memorial Hospital in Augusta. A graduate of Harvard Medical School, Dr. Allen interned at Jefferson Medical College in Philadelphia, Penn. He then worked one year with Dr. Watts R. Webb at the Mississippi State Sanatorium and one year in general practice in Houston, Miss., before entering a residency in general and neurological surgery at the University of Mississippi School of Medicine. Upon completing his residency, he spent a year as a special research fellow in the Laboratoire de Neurophysiologie of the Hospital Henri Rousselle in Paris under the sponsorship of the National Institute of Neurosurgical Service of Blindness. Since August 1962, Dr. Allen has been chief of the neurosurgical service of the Veterans Administration Hospital and clinical instructor in neurosurgery at the University Medical Center in Jackson.

SAMUEL EUGENE FIELD, JR., has joined the Field Clinic of Centreville for the practice of general and thoracic surgery. Dr. Field is a graduate of the University of Mississippi School of Medicine. He interned and completed his residency at Charity Hospital in New Orleans. He also studied under a surgery fellowship at the Lahey Clinic in Boston, Mass.

BERNARD T. HICKMAN of Jackson was among the 42 radiologists named Fellows of the American College of Radiology at the group's annual meeting in Philadelphia Feb. 9-13. The College grants the degree of Fellow to certified radiologists who have given distinguished service to their specialty over the years. Fewer than 1,000 of the College's approximately 5,600 members hold the degree of Fellow. Dr. Hickman was graduated from Tulane University, La. in 1952. He is now a member of the staff of University Medical Center and the Veterans' Administration Hospital in Jackson.

I. C. KNOX, JR., of Vicksburg has been elected to the board of directors of the Merchants National Bank and Trust Company.

WILLIAM W. MAYERS has announced the opening of his office in Laurel for the practice of urology. A graduate of the University of Tennessee Medical School, Dr. Mayers completed his internship at John Gaston Hospital in Memphis. He served his general surgery residency at the Kennedy VA Hospital in Memphis and his residency in urology at the University of Tennessee Medical School and John Gaston Hospital.

GEORGE W. ODEN of Jackson has assumed the duties of chief of medical services at the Ellisville State School.

T. E. ROSS, JR., of Hattiesburg has been named chairman of the board of William Carey College.

R. E. SCHUSTER and CURTIS D. ROBERTS have announced the association of JACK B. CAMPBELL in the McLaurin Medical Center. Dr. Campbell's practice will be limited to general surgery.

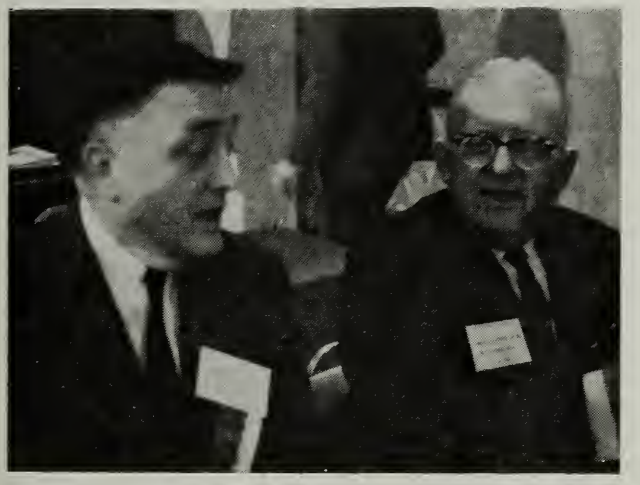
State Morbidity Reported Through Jan. 29

The Mississippi State Board of Health reports the following occurrence of morbidity for 1965 through the 5th week of the year, ending Jan. 29, 1965. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul.	116
Tuberculosis, O.F.	3
Dysentery	
Bacillary	3
Amoebic	1
Diphtheria	1
Mononucleosis, infectious	9
Hepatitis, infectious	22
Tetanus	1
Helminthic infections	
Hookworm	57
Ascariasis	16
Streptococcus infections	
Scarlet fever	11
Strep throat	287
Pertussis	1
Measles	150
Chickenpox	25
Mumps	142
Other Cestode Infestations	3
Influenza	375
Gonorrhea	490
Syphilis	
Early	63
Late	11

Special AMA House of Delegates Session Endorses 'Eldercare,' Opposes Fedicare

Meeting in special session for only the fifth time in 118 years, the American Medical Association's House of Delegates acted at Chicago Feb. 6-7 to endorse medicine's "eldercare" bill, to reaffirm unanimously opposition to compulsory federal medical care under Social Security, and to restate its concern for full comprehensive health care services for all Americans. Drs. J. P. Culpepper, Jr., of Hattiesburg and George E. Twente of Jackson, AMA delegates from Mississippi, represented the state medical association.



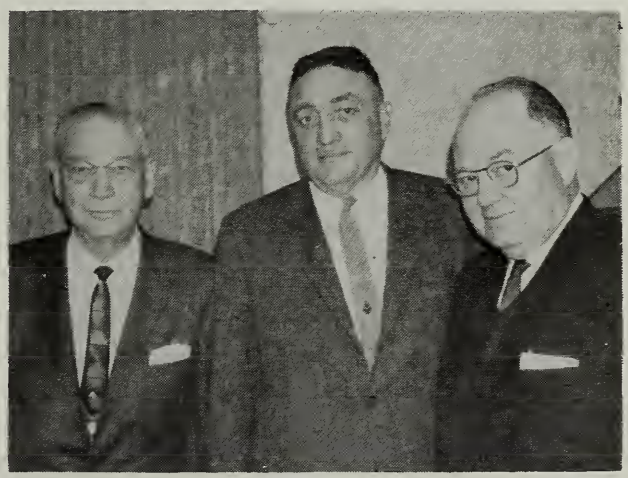
Drs. George E. Twente and J. P. Culpepper, Jr., Mississippi's AMA delegates, confer over a point under discussion at the special House of Delegates meeting in Chicago, Feb. 6-7.

Responding to the speaker's call for the special session "to consider pertinent items relating to current national health legislation . . . and adequate support for the educational, scientific, and other programs of the AMA," the 234 member policy-making body considered a hard hitting address by President Donovan F. Ward, reports from the Board of Trustees, Council on Legislative Activities, and Council on Medical Service, along with a series of state association-sponsored resolutions.

The meeting was open to mass news media with a large gallery of press, wire service, TV, and magazine representatives present. Most debate was conducted before a single reference committee to which all business was referred.

Foremost among five recommendations to the delegates from the Board of Trustees was a "current effort to tell the American Medical Association's story to the people and to the Congress" in a campaign which is being financed through allocation of about $500,000 of reserve funds. No assessment or dues increase was proposed. Officials said that the educational campaign would employ newspapers, magazines, and local radio and television. The major TV networks rejected an AMA bid to purchase air time.

The eldercare program, first proposed on January 9 by Dr. Ward in an address to a national conference on the Kerr-Mills program, has been introduced in Congress as H.R. 3727 by Reps. Herlong (D., Fla.) and Curtis (R., Mo.), both members of the House Ways and Means Commit-



Two California medical leaders get the Mississippi viewpoint at the special Chicago session as Drs. E. Vincent Askey, past president of AMA, left, and Eugene F. Hoffman, AMA delegate, right, talk to Dr. George E. Twente.

tee before which the King-Anderson measure is pending. The AMA-backed bill extends Kerr-Mills and offers all citizens over age 65 comprehensive health care coverage on a basis of need through voluntary prepayment and health insurance. The program would be managed and administered by the several states.

Of seven resolutions offered, one by the Pennsylvania delegation which would have included federally-established income limits and medical service minimums in the eldercare proposal was not considered when the House refused it unanimous consent. Dr. Twente offered the objection. Two other resolutions, sponsored by Indiana and Michigan, which sought extension of care coverage to all age groups were tabled after lengthy debate.

Four resolutions, emanating from the California, Ohio, Washington state, and Section on Radiology delegations, were adopted with editorial revisions. Jointly, they affirmed support for eldercare and opposition to King-Anderson, set out guiding principles for extension of care coverage for senior citizens, and authorized studies on the desirability and feasibility of extending the Kerr-Mills principle to persons below the age of 65 on a basis of need.

AMA spokesmen said that the educational campaign would be initiated immediately following the special meeting of the House, since it was expected that the House Ways and Means Committee would bring out some sort of health care bill before mid-March. The same spokesmen also clarified references from the floor during debate on sums to be expended on the campaign after one delegate erroneously referred to a $4 million allocation.

The special session was held at the Pick-Congress Hotel and presided over by Speaker Milford O. Rouse of Dallas and Vice Speaker Walter C. Bornemeier of Chicago. Dr. Edward R. Annis of Miami, immediate past president, addressed a delegates luncheon on Feb. 6. Adjournment came on Feb. 7 after three hours debate on the final report of the reference committee.

Closing on an inspirational note, the House heard an address by Dr. Durward G. Hall, AMA delegate from Missouri and a Republican member of Congress from his state's 7th district. He urged physicians to write members of Congress and "to overlook no possibility in the struggle to preserve the world's best system of medical care."

Annual Meet Features Streamlined Format

A streamlined format of noncompeting general sessions offers state association members new postgraduate education opportunity at the 97th Annual Session set for May 10-13 at Biloxi. Dr. James L. Royals of Jackson, chairman of the Council on Scientific Assembly, said that six general sessions and the special program feature, the Symposium on Parapsychology, would extend over Tuesday, Wednesday, and Thursday of the meeting. The House of Delegates is the first official function on Monday, May 10.

Scientific activities begin on May 11 with the official opening of technical and scientific exhibits in the Hotel Buena Vista's remodeled and expanded Hurricane Room. A general session on medicine will begin formal scientific deliberations at 9:00 a.m. Following a preluncheon intermission for exhibit viewing and specialty society luncheons, activities resume with a general session on obstetrics and gynecology from 1:30 to 3:00 p.m. After a 30 minute exhibit visiting intermission, a general session on surgery begins at 3:30 and continues until 5:00 p.m.

The Symposium on Parapsychology, featuring the internationally known Drs. J. B. and Louisa E. Rhine of Duke University, will occupy the spotlight on the morning of May 12. General sessions resume in the afternoon with a 2:30 to 5:00 p.m. conclave on preventive medicine and general practice. Morning sessions on May 13 will respectively feature papers on pediatrics and EENT.

Dr. R. J. Field, Jr., of Centreville, chairman of surgery, has announced that his general session will be a seminar on thyrotoxicosis with four essayists scheduled to appear. The preventive medicine session will examine public health problems in control of tuberculosis, heart disease, and population.

Dr. Donovan F. Ward of Dubuque, Iowa, AMA president, will address the House of Delegates on May 10, Dr. Royals said. Ole Miss medical alumni will have a dinner occasion on Monday evening with Tulane and Tennessee grads scheduled to meet on Tuesday night. A special all fun evening for association members, wives, and guests is set for Wednesday evening, May 12.

About 15 specialty societies have scheduled meetings and meal occasions. The annual associ-

ation golf tournament and water sports will offer outdoors recreation. The concluding function will be the adjourned meeting of the House of Delegates on Thursday afternoon when final action is taken on reports and resolutions and 1965-66 officers are elected.

Speakers Urge Forwarding of Resolutions

Component medical societies and delegates having resolutions to submit to the House of Delegates at the 97th Annual Session have been urged to forward them to the state association headquarters office at Jackson. This was the announcement of Drs. Howard A. Nelson of Greenwood, speaker, and William E. Lotterhos of Jackson, vice speaker.

"Early submission of resolutions will enable us to reproduce them and have each included in the delegates' folders," Drs. Nelson and Lotterhos said. "We are anxious that each member of the House and the sponsors enjoy the benefit of having copies of all resolutions when the meeting convenes."

The speakers said that resolutions received would be printed in the proper form without altering the sponsors' objective and intent. Resolutions introduced after the opening meeting of the House of Delegates must qualify as emergency measures to receive consideration.

Mid-South Names Dr. Hicks President-elect

Dr. G. Swink Hicks of Natchez was elected president-elect, and Dr. Moore Moore of Memphis was inaugurated president at the Feb. 9-12 meeting of the Mid-South Postgraduate Medical Assembly.

Dr. Byron A. Mayo of Drew was named vice president from Mississippi.

The meeting was held in the Peabody Hotel in Memphis.

Dr. Long Will Speak At Houston

The United States Section of the International College of Surgeons will sponsor a two day regional meeting at Houston, Texas, March 5-6, 1965, according to Dr. Edward R. Annis of Miami, president. The conclave will be held at the Hotel America.

Dr. Lawrence W. Long of Jackson will present two papers on March 5, "What! A Peptic Ulcer?" and "Hiatus Hernia: What, How, and When." On the concluding day, he is scheduled to moderate a panel on trauma.

Co-chairmen for the meeting are Drs. Robert G. McCorkle and Michael K. O'Heeron of Houston. Registrants from Louisiana to New Mexico are expected, spokesmen said.

Dr. Long is U. S. Section vice president and a member of the International Board of the college.

Texas Hospital Approved For Pediatrics Residency

The Scott and White Memorial Hospital and the Scott, Sherwood and Brindley Foundation in Temple, Texas, have recently been approved by AMA for residency training in pediatrics.

The program will be two years in length, according to Dr. J. Arnold Bargen, director of medical education for the Temple institution.

Dr. Knox Named To Sports Hall of Fame

Dr. I. C. Knox, Sr., of Vicksburg was among five outstanding sports figures inducted into the Mississippi Sports Hall of Fame on Feb. 8.

A native of Pontotoc, Dr. Knox was an outstanding athlete at Ole Miss in the early 1900's. He lettered in football in 1907-08, in basketball in 1909, and in baseball in 1905-08. He was chosen as the best athlete at Ole Miss in 1907-08 and served as football captain in 1908, the year he was picked for All-Southern honors by Grantland Rice, the most famed sportswriter in the nation's history.

Rice said of Dr. Knox, "He was probably the best individual player in the South. . . . If Knox had played on a Vanderbilt, Auburn, or Sewanee eleven, he would more than likely have been hailed as one of the greatest halfbacks of the decade."

Dr. Knox received his B.A. degree from Ole Miss in 1908 and the Medical Certificate in 1909. He was graduated from the Vanderbilt University School of Medicine in 1911.

Sponsored by the Jackson Touchdown Club, the induction banquet was held in Jackson. Others inducted were James E. Poole of Oxford, David Ferriss of Cleveland, Claude Passeau of Lucedale, and the late Jesse Fatheree of Jackson.

Large portraits of all 14 Hall of Fame members and plaques listing highlights of their athletic careers are placed on permanent display at the Mississippi Coliseum, and each member receives a Hall of Fame certificate.

Board of Health Opens Oral Cytology Program

Dr. Aaron Trubman, supervisor of public health dentistry with the Mississippi State Board of Health, has announced the opening of an Oral Cytology Program.

Said Dr. Trubman, "Since dentists have the primary responsibility for examination of oral tissues, an Oral Cytology Program was initiated by the Mississippi State Board of Health in late 1964 to encourage and acquaint dentists with the cytology technique for the detection of early oral cancers. This program has the support of the Mississippi Dental Association and the pathologists in the state. It is financed by a contract with the U. S. Public Health Service."

The purpose of this program, according to Dr. Trubman, is to encourage the use of exfoliative oral cytology by dentists for the detection of early cancer and to acquaint the dentists with recommended follow-up procedures and resources available in their geographical areas for further diagnosis and treatment.

So far, seven conferences have been held in various locations in the state to which dentists have been invited to learn of the value of oral cytology and the technique for taking oral smears. Almost 50 per cent of the dentists in the state are now participating in this state-wide program. Participating dentists receive free oral cytology kits complete with history forms. Additional kits are furnished as needed.

The Mississippi State Board of Health is maintaining a file on all reported smears and biopsies (recommended as a result of smear findings) and is coordinating all functions related to indicated further diagnosis and medical follow-up service of appropriate cases.

All relationships between the patient, dentist, and pathologist are maintained on the normal, private practice basis. This program does not pay for any professional services. Indigent patients are eligible for treatment under the State Cancer Control Program that has been in operation for many years.

It is expected that this demonstration program will continue at least until mid-1966, according to Dr. Trubman.



NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

Bolton, Dewitt Lamar, Picayune. Born Franklinton, La., July 7, 1935; M.D., Louisiana State University School of Medicine, New Orleans, 1961; interned Macon Hospital, Ga., one year; captain, U. S. Air Force, two years; elected Dec. 10, 1964, by Pearl River County Medical Society.

Cooper, Wiley Howard, III, Jackson. Born Selma, Ala., Oct. 19, 1933; M.D., Medical College of Alabama, Birmingham, 1958; interned University Hospital, Birmingham, Ala., one year; radiology residency, Bowman Gray School of Medicine, Winston-Salem, N. C., three years; captain, U. S. Air Force, two years; elected Nov. 3, 1964, by Central Medical Society.



DEATHS

Hall, Ambrose Milton, Jackson. M.D., Meharry Medical College, Nashville, Tenn., 1932; died Aug. 20, 1964, aged 62.

Klotz, Solomon Paul, McComb. M.D., Tulane University School of Medicine, New Orleans, La., 1903; interned Touro Infirmary, New Orleans, La.; Emeritus member of MSMA and member of the Fifty Year Club; died Jan. 22, 1965, aged 84.

Murray, James Preston, Wiggins. M.D., Tulane University School of Medicine, New Orleans, La., 1912; died Jan. 26, 1965, aged 76.



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1. Welch, C. E., Diverticula of the Alimentary Tract, in Conn, H. (editor): Current Therapy—1961, Philadelphia, W. B. Saunders Company, 1961, pp. 224-225.

SEARLE

Research in the Service of Medicine

Summa Medica Program Announced

Loma Linda University has announced the development of its Summa Medica program—a systematic, sequential curriculum of lectures by medical specialists issued weekly on magnetic tape.

According to Dr. Walter E. Macpherson, professor of medicine at the Los Angeles university, Summa Medica culminates six years of study and research in postgraduate medical studies by a major school of medicine working in conjunction with leading medical centers.

Further information may be secured from Lifelong Medical Learning, Inc., 2009 East First St., Los Angeles, Calif. 90033.

AMA-ABA Sponsors Medicolegal Symposium

Sponsored by the American Medical Association and the American Bar Association, the National Medicolegal Symposium will be held March 11-13 in Las Vegas. Participants include retired U. S. Supreme Court Justice Charles E. Whittaker; Governor Grant Sawyer of Nevada; Dr. Joseph F. Sadusk, Jr., medical director of the Food and Drug Administration and chairman of AMA's Committee on Medicolegal Problems; four judges; a law school dean; ten physicians, and 23 attorneys.

Speaking on behalf of the AMA-ABA Liaison Committee, co-chairmen Dr. Percy E. Hopkins and Thomas Boodell, stated: "This promises to be one of the largest and most significant medicolegal meetings ever held. It will be a giant step in improving the administration of justice and in promoting harmonious relations between the medical and legal professions."

Justice Whittaker of Kansas City, Mo., will speak on "Self Discipline—A Right of the Professions" at the Friday, March 12, luncheon.

Governor Sawyer will present the opening remarks of the symposium, on Thursday, and Dr. Sadusk will speak Saturday morning on the physician's viewpoint when he is sued by a patient.

Dr. Wesley W. Hall of Reno, Nev., a trustee of the AMA, will moderate the Thursday afternoon program on "The Physician-Client—What Every Lawyer Should Know." Robert S. Mauck,

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in such conditions as:
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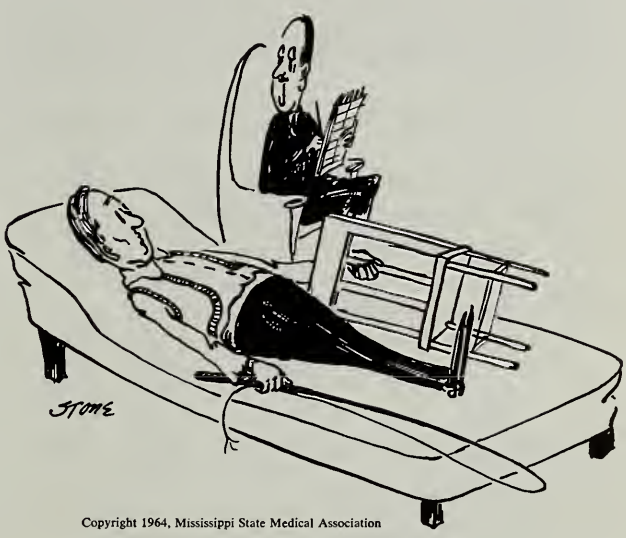
Columbus, Ohio, will discuss business problems of a medical practice; Don Harper Mills, M.D., LL.B., of Los Angeles will speak on professional problems of a medical practice, and Los Angeles attorney Arthur B. Willis will discuss tax problems of a medical practice.

A discussion, "The Legal Advisor—What Every Physican Should Know" on Friday morning will be moderated by Dr. George M. Fister of Ogden, Utah, a past president of the AMA. Legal advice on personal and professional matters and the physician's annual legal checkup will be presented by three speakers: Robert B. Murphy, Madison, Wisc.; C. Dean Davis, Austin, Texas, and Philip Habermann, Madison, Wisc. There will be a question and answer period following each of the series of discussions.

The first of three trial vignettes will be presented Friday morning. Taking part will be Judge John C. Mowbray, Las Vegas; Dr. Russell S. Fisher, Baltimore, and Chicago attorneys Philip H. Corboy and Charles M. Rush.

Participants in the Friday afternoon courtroom vignette on "Psychiatry and the Law" will be Judge David Zenoff, Las Vegas; Dr. John K. Torrens, Albuquerque, N. M., and attorneys Louis G. Davidson and Tom L. Yates, both of Chicago.

In the Saturday morning vignette on "Trauma and Its Effect," Judge Kenneth N. Chantry, Los Angeles, will preside. Dr. Jurgens H. Bauer, Las Vegas, will serve as the expert witness, and attorneys will be Donald P. Lay, Omaha, Neb.; Michael R. Gallagher, Cleveland; Newton Gresham, Houston, and John R. McConnell, Philadelphia.



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ACP to Observe Golden Anniversary

The Golden Anniversary Session of the American College of Physicians (ACP) will convene in Chicago, March 22-26, at the Conrad Hilton Hotel. Highlights of the meeting will be presentations by prominent internists who received top awards from ACP in 1933, 1949, and 1957 and an emphasis on the relationship of psychiatry to internal medicine.

Some 300 physicians and other medical scientists, including two from Norway and Switzerland, will take part in the five-day scientific program.

Internal medicine specialists attending the session will receive reports on late developments in the diagnosis and treatment of diseases via plenary sessions, panel discussions, lectures in basic medical sciences and clinical investigation and closed circuit television programs. On two mornings, the physicians will attend special clinics in Chicago hospitals.

The scientific program will be interrupted briefly Thursday afternoon, March 25, for the Annual Business Meeting of the College. At that time, the presidency of the American College of Physicians will transfer from Dr. Durant to Dr. A. Carlton Ernstene, Cleveland, Ohio.

The Annual Convocation of the College is scheduled for Thursday night, March 25. The ceremony, at which several hundred physicians will be inducted into the ACP, will include presentation of four major awards for individual contributions in internal medicine and other medical and scientific fields. Masterships, Honorary Fellowships and Corresponding Fellowships will also be awarded.



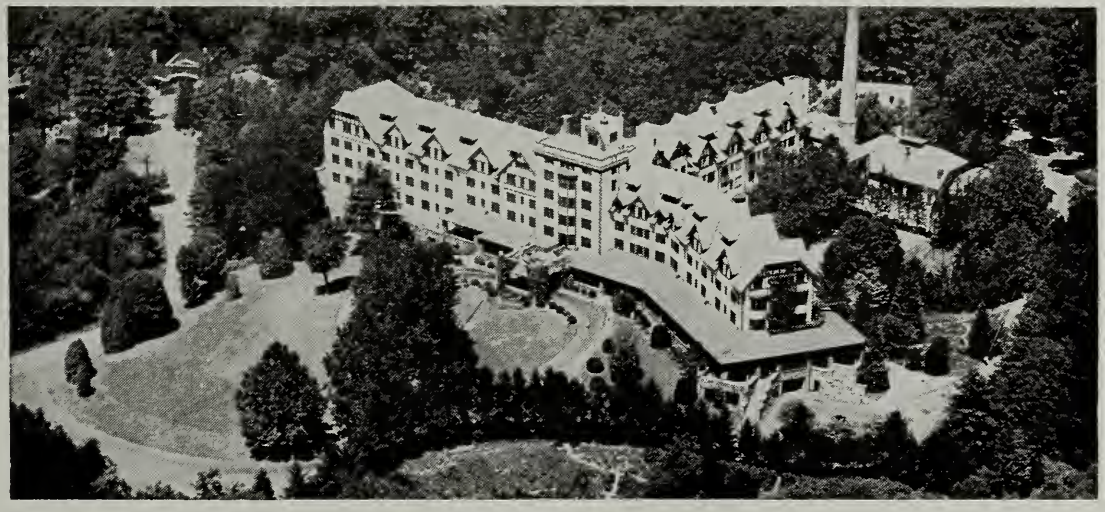
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NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION
JACKSON, MISSISSIPPI

April 1965

Dear Doctor:

The soon-to-be-felt disenchantment with the 1964 tax cut will extend beyond the insufficient withholdings into computation of sick pay. The new law reduces tax exclusions for sickness to $75 from former $100 for the first week and only then if taxpayer was hospitalized and weekly sick pay didn't exceed 75 per cent of salary.

> Tax authorities say that 400 million work days involving billions of dollars were lost by sickness in 1964. The old $100 per week exclusion doesn't apply now until after 30 calendar days of continuous disability.

There is a Mississippi-sponsored Eldercare bill in Congress, identical to the Herlong-Curtis measure, H.R. 3727, which is supported by AMA. Rep. Prentiss Walker of Mize, 4th District Republican, introduced H.R. 5892 and declared his opposition to King-Anderson. Meanwhile, House rolls on with revision of H.R. 1, and some say that first round may be concluded this month.

The familiar letters, "LSMFT," may remind most of a famous cigarette advertising jingle, but they now stand for an anti-smoking group. The League to Save Mankind From Tobacco is said to have as its purpose the goal of helping smokers beat the habit.

The State Board of Pharmacy has taken the position that methamphetamine inhalers may now be dispensed only as prescription drugs. Ruling following closely on FDA edict that inhalers bear federal Rx legend. Evidence shows abuse of methamphetamine wicks, sometimes used as substitute for amphetamine tablets.

AMA forecasts that 114th annual convention at New York, June 20-24, will be biggest scientific medical convocation in history. Preparations are being made for 69,000 plus registration to include over 25,000 physicians. Added attraction of NY World's Fair will be substantial drawing card.

Sincerely,

Rowland B. Kennedy
Executive Secretary

DATELINE - MEDICAL AMERICA

Summer Preschool Health, Training Program Is Scheduled By OEO

Washington - Sergeant Shriver, Office of Economic Opportunity director, has announced a summer program of two months duration for preschool children which would include health services and training to build communications abilities and self-confidence. Children would come only from so-called poverty-class families, and federal subsidy would pay 90 per cent of $85 per month cost. Overture has been made to Mississippi authorities on project, bypassing U. S. Public Health Service and medical organization.

Private Practice Growth Lags Overall Physician Increase

Chicago - Latest AMA studies show that since 1960, physicians in private practice increased by only 6 per cent, while those not in private practice grew by more than 20 per cent. Numerically, former gain was about 10,000, but non-private practice group expanded by 21,000. Most notable increases, ranging from 20 to 40 per cent, were in USPHS, VA, and armed forces. As of March 1, AMA records 284,271 physicians in U.S.

New York Lab Is First With Computer Controlled Blood Testing

Brooklyn - A New York research laboratory has apparently pioneered in high speed blood testing techniques by using an IBM 1701 computer to control and monitor a bank of autoanalyzers. Ten separate tests from one blood specimen can be done every 12 seconds. Computer monitors and "reads" analyzer findings, comparing instantaneously with known values to make mathematical evaluations.

Radiologists Seek Exclusion From King-Anderson

Chicago - The American College of Radiology, reaffirming its stand by the AMA and against King-Anderson, is moving decisively to exclude services of radiologists from the compulsory federal hospital care plan. ACR Board Chairman W. D. Buchanan said that "the future of radiology may depend upon our success." King-Anderson provisions cover both diagnostic and therapeutic radiology.

Michigan Expands Home Care Under Blue Cross

Detroit - The Michigan Hospital Service (Blue Cross), after concluding a successful pilot program of visiting nurse services in homes, has expanded coverage to include seven new home care services. Offering medical, nursing, social, dietary, and physical therapy services in the home, the Michigan Blue Plan says that more than 19,000 days of hospitalization were saved last year, permitting almost 3,000 additional admissions for inpatients needing hospital care.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
April 1965, Vol. VI, No. 4

ORIGINAL PAPERS

A Fatal Hepatic Complication Of Sickle Cell Anemia

DAVID M. OWEN, M.D.; JOHN E. ALDRIDGE, M.D.,
and ROBERT B. THOMPSON, M.D.
Jackson, Mississippi

Five cases of sickle cell anemia with hepatomegaly, progressive jaundice, and terminal liver failure are presented. The authors discuss the pathogenesis of this type of intrahepatic obstructive disease and note that the stasis of sickle erythrocytes and liver sinusoids combined with the swelling of Kupffer cells would lead to varying degrees of ischemia, coagulation necrosis of liver cells and bile stasis. They conclude that this type of liver disease is peculiar to sickle cell anemia.

THE SEQUELAE OF SICKLE CELL anemia attributable to reduction and crystalization of hemoglobin with subsequent stasis and sludging of sickled erythrocytes in the vascular system are well recognized. As a result of such vascular occlusions, ischemic parenchymal degeneration and necrosis result followed by fibrosis and atrophy. Characteristic lesions are seen in the spleen,[7, 8, 13] renal papillae and less often in the lungs of sickle cell anemia patients.[2, 7] However, little has appeared in the literature regarding similar phenomena in the liver.[9, 10]

In younger children with sickle cell anemia, a constant finding during crisis is hepatomegaly. If the liver is palpable in the third and fourth decades, severe liver dysfunction is usually present. Green *et al.*[3] found moderate to severe hepatic dysfunction with hepatomegaly in 76 per cent of cases studied in adult sicklers.

Because of the presence of hepatomegaly in five cases of homozygous sickle cell disease with progressive jaundice and terminal liver failure, the following paper is written.

METHODS

Routine methods[14] were used for determination of hemoglobin, hematocrit, reticulocyte, white blood and red blood counts. Peripheral Wright stained smears were studied for alteration in red and white cell morphology. Hemoglobin samples were prepared for electrophoresis according to the method of Thompson *et al.*[11] Electrophoresis was performed as outlined in an earlier publication.[11] Quantitation of hemoglobin fractions was performed on DEAE cellulose chromatography as outlined by Huisman *et al.*[5] The solubility of the hemoglobin fractions in reduced state was performed by the method of Itano,[6] and the fraction subsequently designated as Hb-S showed a decreased solubility in the reduced state.

CASE I

A 23-year-old colored female (L.V. No. 9771) was first seen at the University of Mississippi Medical Center in July 1956, with a history of

From the Departments of Medicine and Clinical Laboratory Sciences, University of Mississippi School of Medicine.

headache, fever, and abdominal pain. She had a history of anemia of 21 years' duration. On admission she was found to be a thin, acutely ill female with generalized lymphadenopathy. The tonsils were enlarged and injected. A Grade II, low-pitched systolic murmur was heard along the left sternal border. There was generalized abdominal tenderness and hepatomegaly. A corrected white blood count at this time was 15,000 with a hematocrit of 12 per cent, and a hemoglobin of 4 gm. A sickle cell preparation by metabisulfite method was positive. Examination of the peripheral smear disclosed numerous nucleated red cells as well as marked hypochromia and microcytosis. A serum bilirubin at this time was 1.5 mg. per cent. The patient was thought to have acute tonsillitis in addition to a sickle cell crisis and was treated with antibiotics and fluid.

In January 1962, the patient returned with pneumonia for which she was treated with antibiotics. At this time, the serum bilirubin was 3.3 mg. per cent, the alkaline phosphatase 14 King-Armstrong units and the cephalin flocculation 2+. Hemoglobin electrophoresis revealed only Hb-S with normal Hb-A_2 (see Table 1).

TABLE 1

RESULTS OF HEMOGLOBIN ELECTROPHORESIS AND QUANTITATIVE EXAMINATION OF CASES UNDER STUDY

	Hb Phenotype	*% Hb-A2*	*% Hb Solubility*
Case I	SS	2.4	30
Case II	SS	2.2	25
Case III	SS	2.4	40
Case IV	SS	—*	27
Case V	SS	—*	25

* Paper Electrophoretic separation

In July 1963, she was admitted for a tonsillectomy and adenoidectomy. One unit of packed cells was given prior to surgery, which she underwent without difficulty.

On her fourth and final admission in October 1963, she presented with a 10 day history of pain in the knees, elbows and wrists without redness or swelling. In addition, gradually progressing scleral icterus was noted. Physical examination at the time of admission disclosed an acutely ill, colored female with icteric sclerae. Clotted blood was present on the gingival margin. Her liver was palpable three fingerbreadths below the right costal margin and was tender. A flapping tremor was present in both hands. Blood pressure at this time was 100/70, pulse 100, respiration 20, and temperature 99.8° F.

The pertinent laboratory data during the final hospital course are shown in Tables 2, 3, and 4. The corrected white blood cell count on admission was 33,600. There was a marked shift to the left with an absolute increase in all elements. Red cells showed 4+ hypochromia, polychromasia, poikilocytosis and anisocytosis with 2+ macrocytosis and microcytosis. Numerous nucleated red cells were seen. The hemoglobin was 8.2 gm. per cent and the hematocrit 24 per cent. The urine showed a 4+ reaction for bilirubin but was negative otherwise. (Electrolytes in mEq/L were chloride 103, CO_2 23, potassium 3.0, and sodium 129.) Total bilirubin was 69 mg. per cent with a direct fraction of 43 mg. per cent. Other chemistries were: SGOT 1,310 units, thymol turbidity 10.8 SH units, cephalin flocculation 4+, alkaline phosphatase 67 King-Armstrong units, BUN 39 mg. per cent, and uric acid 8.4 mg. per cent. A bone marrow aspiration at this time showed only a marked normoblastic hyperplasia.

Her course was progressively downhill from the time of admission. Stools were of normal color, but repeatedly positive for blood. She went from a stage of impending coma to actual hepatic coma in spite of routine therapy with intravenous fluids, enemas, low protein diet, vitamins, tetracycline and prednisolone. The serum bilirubin rose to 81 mg. per cent with a direct fraction of 43 mg. per cent.

Postmortem examination was refused, but a liver biopsy was obtained. (See Figure 1.) The hepatic sinusoids were plugged with sludged sickle cells. The Kupffer cells were swollen and showed marked cloudy swelling with early nuclear degeneration. The small bile canaliculi contained bile casts. There was no histologic evidence of perivascular or interstitial inflammatory infiltrate.

CASE II

A 22-year-old colored male (R.M. No. 120366) was first seen at the University of Mississippi Medical Center on Sept. 9, 1963, with a history of sickle cell disease known since childhood. The patient had frequent episodes of crisis, manifested by pain in his back, chest, and joints. In July 1963, he developed a throbbing pain in his chest, leg, and back after walking several miles and was subsequently hospitalized by his local physician and given two units of whole blood. Approximately six weeks later he noticed increas-

ing drowsiness and weakness with intense scleral icterus and dark urine.

Physical examination on admission showed a blood pressure of 120/50, pulse 78, respiration 18, and temperature 98.6° F. He was described as being a poorly developed, thin, Negro in no distress. The sclerae, gums, and mucous membranes were icteric. The liver was palpable two fingerbreadths beneath the right costal margin and three fingerbreadths below the xiphoid process but was nontender.

Laboratory investigation on admission revealed a hemoglobin of 7.8 gm. per cent, hematocrit 22 per cent, reticulocyte count 18 per cent, and a corrected white blood count 15,600 with a marked shift to the left. On the peripheral smear, 62 nucleated red cells/100 white blood cells were seen. The red cells showed 2+ hypochromia, 2+ polychromasia, 3+ poikilocytosis, 3+ macrocytosis, 1+ microcytosis and 4+ anisocytosis. Urine was 4+ for bilirubin and 2+ for hemoglobin. The serum bilirubin was 89 mg. per cent with direct reading fraction of 49 mg. per cent. SGOT was 1,870 units, alkaline phosphatase 56 King-Armstrong units, thymol turbidity 6.8 SH units, cephalin flocculation 1+, and BUN 21 mg. per cent. The clinical impression at this time was that of sickle cell crisis with bile inspissation in the canaliculi of the liver. Results of hemoglobin electrophoresis confirming the diagnosis of homozygous Hb-S disease are shown in Table 1.

The patient was placed on bed rest and hydrated with 4-5 liters of intravenous fluids daily. On Sept. 17, 1963, the SGOT was 1,360 units, cephalin flocculation 1+, bilirubin 87 mg. per cent with a direct fraction of 44 mg. per cent. On Sept. 18 he developed slight gingival bleeding with epistaxis which was not controlled by pressure or ice bags. At this time his prothrombin time was 1 minute with a control of 15 seconds indicating less than 1 per cent activity. There was no correction with normal serum or plasma. The red blood cell half-life survival was three days (normal 25-35 days). The plasma hemoglobin at this time was 5 mg. per cent. The pertinent laboratory data are shown in Tables 2, 3, and 4.

TABLE 2

BIOCHEMICAL STUDIES OF CASES

	Date	*Bilirubin* TOTAL MG. %	*Bilirubin* DIRECT MG. %	*Alk. Phos. K-A units*	*SGOT R.F. units*	*Thymol Turb. SH units*	*Ceph. Floc.*	*Total Protein mg. %*	*Albumin mg. %*	*Globulin mg. %*
Case I (L.V. No. 9771)	7-23-56	1.5	0.2							
	1-25-62	3.3					2+	8.5	6.0	2.5
	1-29-62	1.7		14						
	2-29-62	2.6	0.3							
	10- 1-63	70	43	67	1190	10.8	4+	9.4	3.9	5.6
	10- 3-63	81	44	65	1310					
	10- 7-63	54.2	41.2	37	188					
	10- 9-63	52.2	30.9	88	190					
Case II (R.N. No. 120366)	9- 9-63	89.1	49.0	51	1870			9.0	3.6	5.4
	9-11-63						1+			
	9-16-63	87	45	79	1360		1+			
	9-22-63									
	9-23-63									
Class III (D.L.K. No. 67232)	7-31-60	35.0	21.2	50			2+	9.2	3.8	5.4
	8- 3-60	66	41							
	8- 5-60	66	42							
	8- 6-60	51	29							
	8- 8-60	45	27							
Case IV (W.McL. No. 85004)	8-10-61	61.2	40							
Case V (J.J.L. No. 26602)	11-16-61	82	20	54				9.0	4.9	4.1
	11-20-61					6.2	4+			
Normals		0.1-1.0	0.2	5-15	0-44	0-4	0-1+	7.7-8.0	3.4-5.1	2.2-3.3

On Sept. 22 the patient became lethargic and delirious. Stool examinations revealed normal color but were positive for occult blood. His hemoglobin at this time was 7.6 gm. and hematocrit 22 per cent. Electrolytes were as follows: sodium 118 mEg/L, potassium 2.4 mEq/L, chloride 74 mEq/L, and CO_2 20 mEq/L. Therapy for hepatic coma was started with a low protein diet, intravenous fluid, Neomycin, Prednisolone and blood, but the following day the patient developed hematuria, went into coma and expired. A postmortem examination was refused.

CASE III

A 16-year-old colored female (D.K. No. 67232) was first seen at the University of Mississippi Medical Center on July 30, 1960, with a chief complaint of epistaxis of one day's duration. The patient had been known to have sickle cell anemia since the age of 2 years and recently had developed chronic leg ulcers. One week prior to admission the patient was seen by a local physician because of chronic leg ulcers and was found to be anemic. She was subsequently transfused with three units of whole blood and remained well until two days prior to admission, when she developed headache, abdominal pain, nausea, vomiting and diarrhea.

Physical examination at the time of admission showed a blood pressure of 104/50, respiration 28, pulse 136, and temperature 100.2° F. She was described as an acutely ill, icteric colored female with obvious bleeding from the nose and gums. There was evidence of right upper quadrant tenderness and a palpable right liver edge.

The pertinent laboratory data on admission and during her hospital course are outlined in Tables 2, 3, and 4. Hemoglobin on admission was 3.8 gm. per cent, hematocrit 10 per cent and corrected white blood count 22,900 with a marked shift to the left. On peripheral smear there was 4+ anisocytosis, poikilocytosis, polychromasia and hypochromia with a 2+ macrocytosis and 2+ microcytosis. Frequent nucleated red cells were seen. A sickle cell prep by metabisulfite method was positive. The results of hemoglobin electrophoresis and subsequent study confirming the diagnosis of Hb-S disease are as seen in Table 1. At this time, additional laboratory data revealed an NPN of 133 mg. per cent, and serum bilirubin 25 mg. per cent with a direct fraction of 21 mg. per cent.

Five hundred ml. of whole blood and 500 ml. of packed cells were given on admission followed by hydration with intravenous fluids. Three days after admission the NPN had fallen to 94 mg. per cent. Serum bilirubin continued to rise to 55 mg. per cent with a direct fraction of 42 mg. per cent. Serum hemoglobin was 4 mg. per cent, and alkaline phosphatase 50 K.A. units. Repeated stool examination revealed a normal color but was positive for blood (2+).

A sternal marrow biopsy was obtained showing a marked normoblastic hyperplasia.

Five days after admission her epistaxis resumed; a prothrombin time was 25 seconds (normal 15 sec.) indicating 10 per cent activity and evidence of Factor X deficiency. The clotting time was 84 minutes and platelet count 145,000/cu mm. On the sixth hospital day the patient went into shock, became comatose, and expired.

A postmortem examination was carried out five hours after death. There was marked icterus of all mucosal and serosal surfaces as well as frequent petechial hemorrhages subserosally and submucosally. The liver weighed 2,010 gm. and presented a smooth, mottled surface. On section the mottled areas appeared to be centrolobular in distribution. Frequent pigment stones were seen in the gallbladder. Microscopic examination of the liver showed a similar picture to that described previously (see Figure 1). Sludged sickled cells were present in sinusoids. The Kupffer cells were swollen and contained hemosiderin. The hepatic cells were swollen and showed coagulation necrosis; there was evidence of inspissated bile in the canaliculi. The spleen weighed 80 gm. and on section, numerous infarcts were seen. The kidneys were swollen and showed the appearance of cholemic nephrosis. Microscopic examination

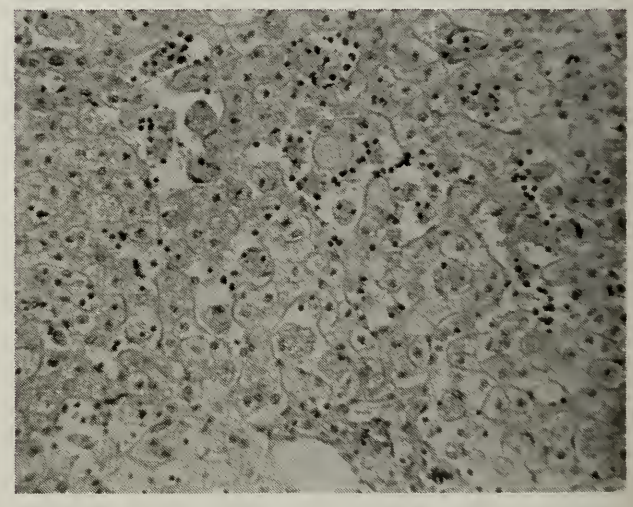


Figure 1a. Liver—H and E section × 200. Extramedullary hematopoiesis with agglutinative thrombi of sickled erythrocytes in sinusoids.

TABLE 3

HEMATOLOGIC DATA OF CASES

	Date	Hb. gms./100	Hct. %	Reticulo. %	Corrected WBC/cmm.	Mono.	Lymph	Eos.	Baso.	Segs.	Bands	Meta.	Myelo	Promyelo	Blasts	RBC 10^6/cmm.	Platelets/ cmm.	Nucleated Red Cells/ 100 WBC
Case I (L.V. No. 9771)	7-23-56	6.1	15		15900	159	4929			5406	2385	1749	1113			1.72		2
	7-24-56	6.0	16		40000	460	17020	460		12880	2300	5980	3680	2760	460			
	7-30-56	8.5	22.5		10500													279
	8-20-56	10.6	27		13991	3900	11970	798		9576	266							19
	1-21-61	10.4	30		14300	1144	5120	286	143	6721	286							1
	8-25-61	7.3	24		11000	1540	4730	550		3630	440	110						4
	1-25-62	7.8	26	9.4	20000	1800	2000			15200	1000							12
	1-29-62	6.9	22		17700	1002	7181	501		6515	167	167	167	167				6
	2- 2-62	7.5	24		12100	1694	5708			4598								2
	2-23-62	9.0	32		14450	864	7776	864		4326	864							
	2-15-63	9.1	29		14300	2431	4867	572	286	6149								
	6-18-63	8.2	26.5		16500	1155	4075	165	330	4620	990		165					
	10- 1-63	7.2	24	42	30200	302	5738			14194	2718	1510	4530	1208			380000	115
Case II (R.N. No. 120366)	9- 9-63	7.4	21		12400	1240	6076		124	4340	620							110
	9-10-63	7.8	22	18.0	15600	1092	2340			6240	2652	780	780	1716				
	9-21-63	7.1	21														99000	
	9-22-63	5.8	18															
	9-23-63	4.3	8															
Case III (D.L.K. No. 67232)	7-30-60	3.8	10		9000													
	7-31-60	8.1	19	(3000 cc.—blood transfusion)														
	8- 2-60	4.5	12	(transfusion)														
	8- 3-60	8.1	24															
	8- 5-60	7.2	21	10	9000	1080	1080	810		5490	540							163
	8- 6-60	5.3	18		35000	350	3150	1050	350	19250	10850						145000	40
	8- 8-60	7.3	25		50000													
Case IV (W.McL. No. 85004)	8- 9-61	4.9	28	10	23350	3262	11184			2563	2563	932	1864	932				54
	(1000 cc. of blood)																	
	8-10-61	6.3	35		13500	666	2762	74	74	1384	2124	304	222				130000	50
Case V (J.J.L. No. 26602)	11-16-61	7.1	19	15	14800	1332	4136			7884	888							5
	11-17-61	7.0	20		29050													
	11-20-61	4.0	11															

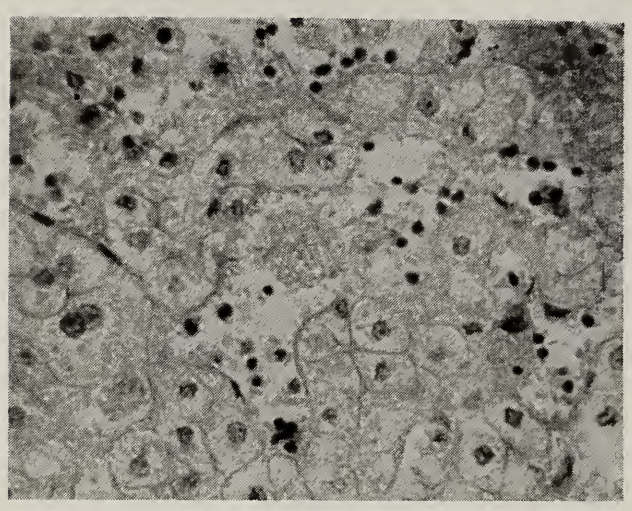


Figure 1b. Liver—H and E section × 475. Agglutinative thrombi of sickled erythrocytes in sinusoids. Notice swollen Kupffer cells and coagulation necrosis of liver cells.

showed numerous hemoglobin casts in the distal and convoluted tubules.

CASE IV

This 20-year-old colored male (W.McL. No. 85004) was first admitted to the University of Mississippi Medical Center on Sept. 10, 1961, complaining of a 10 day history of back and chest pain, gradually increasing scleral icterus, anorexia, and darkening of his urine.

Physical examination on admission revealed a markedly icteric and comatose colored male with a blood pressure of 100/70, pulse 110, temperature 99.2° F., rectally. There was bleeding from the gingival margins. A Grade II systolic murmur was heard along the left sternal border. The abdomen was distended and the liver was palpable approximately two fingerbreadths beneath the right costal margin. Blood was noticed in the feces on rectal examination, but normal brown color was present.

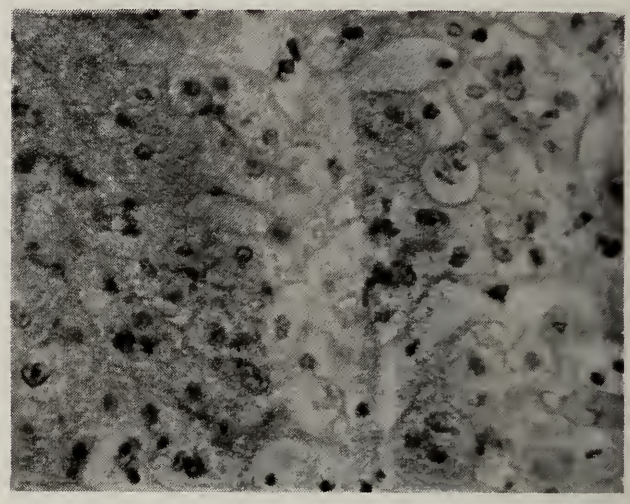


Figure 1c. Liver—H and E section × 475. Swollen, degenerating liver parenchymal cells. Notice bile plug in canaliculus in lower right field.

TABLE 4

RESULTS OF URINARY AND PLASMA DATA ON CASES

	Date	*S.G.*	*Bilirubin*	*Urobilinogen*	*Porphyrin*	*Hb.*	*Plasma Hb. mg. %*
Case I (L.V. No. 9771)	7-24-63	1.011					
	1-25-62	1.008					
	2-15-63	1.010					
	10- 1-63	1.013	4+	neg.		2+	8
	10- 3-63		4+	neg.			
Case II (R.N. No. 120366)	9- 9-63	1.009				2+	5
	9-11-63	1.008	4+	trace			
Case III (D.L.K. No. 67232)	8- 2-60	1.011					
	8- 5-60	1.006	4+	neg.		2+	4
Case IV (W.McL. No. 85004)	8- 9-61	1.011	4+	neg.	neg.	2+	
Case V (J.J.L. No. 26602)	11-16-61	1.019	4+	neg.			
Normals		1.020	0	0	0	0	0-5

Laboratory investigation on admission revealed a hemoglobin of 6.3 gm. with a hematocrit of 20 per cent, a corrected white blood cell count of 13,500, and a positive sickle cell prep by metabisulfite method. Examination of the peripheral smear revealed frequent nucleated red cells with the remaining red cells showing 4+ hypochromia, polychomasia, and poikilocytosis. Serum bilirubin was 57 mg. per cent with a direct fraction of 35 mg. per cent. Hemoglobin electrophoresis by conventional paper electrophoresis revealed Hb-S in excess of 90 per cent. Pertinent laboratory data is shown in Tables 2, 3, and 4.

Two units of packed cells were given. Twelve hours later congestive heart failure developed. The patient was dititalized but went into shock. He was treated with intravenous Levophed, Prednisolone, Menadione and antibiotics but failed to respond and expired shortly thereafter.

A postmortem examination was carried out two hours after death. All mucous and serosal surfaces showed evidence of icterus. Scattered punctate hemorrhages were seen throughout the gastrointestinal tract. The liver weighed 2,320 gm. and presented a smooth, mottled surface. On section the mottled area again appeared to be in the centrolobular areas. Microscopic examination revealed numerous collections of sludged sickled cells in the sinusoids with swelling of Kupffer cells and evidence of phagocytosis. The liver parenchymal cells were swollen and showed coagulation necrosis and bile plugs were seen in the cholangioles. The spleen weighed 20 gm., was small and firm in consistency and on section showed scattered old and recent infarcts. The kidneys were swollen and presented the characteristic appearance of cholemic nephrosis.

CASE V

This 12-year-old colored male (J.J.L. No. 26602) was admitted to the University of Mississippi Medical Center on Nov. 16, 1957, with a three day history of nausea, vomiting, vague abdominal pain, scleral icterus, and darkening of the urine. The patient was a known case of sickle cell anemia for a year having been diagnosed by paper electrophoresis (Table 1). On admission the patient was described as being acutely ill with markedly icteric sclerae, mucous membranes, and palms. His blood pressure was 100/40, pulse 100, temperature 103.4° F. A Grade II systolic murmur was heard over the precardium. There was evidence of hepatic enlargement to four fingerbreadths beneath the right costal margin and exquisite tenderness over the liver edge. Rectal examination revealed stools of normal color.

Laboratory investigation on admission revealed a hemoglobin of 7.0 gm. per cent with a hematocrit 20 per cent, BUN 50 mg. per cent and a total serum bilirubin of 82 mg. per cent with a direct fraction of 20 mg. per cent. There was a 4+ cephalin flocculation, a thymol turbidity of 6.2 units and an alkaline phosphatase of 54 K.A. units. Refer to Tables 2, 3, and 4 for further laboratory data.

Because of the severe nature of the patient's illness, he was started on intravenous hydrocortisone. Routine management of approaching hepatic coma was instituted with intravenous fluids and wide-spectrum antibiotics, as well as a low protein diet. However, the patient pursued a steadily downhill course with hematemesis, melena and expired in hepatic coma some five days after admission.

A postmortem examination was performed less than five hours after death. Again all mucosal and serosal surfaces showed evidence of icterus. The liver weighed 2300 gm., was swollen and mottled. On section, there was evidence of centrolobular mottling. Microscopic examination revealed agglutinative sludged sickle cells in sinusoids, swelling of the Kupffer cells and coagulation necrosis of liver parenchymal cells. Bile plugs were present in canaliculi. The spleen was shrunken and fibrotic (30 gm.). On section, old and recent infarcts were seen. The kidneys were swollen and bile stained.

DISCUSSION

All five cases illustrate the same pertinent findings: (a) proven homozygous Hb-S disease in cases ranging between 12 and 23 years, (b) absence of hyposthenuria, (c) hyperplastic crises, (d) leukemoid reaction; (e) hepatomegaly with evidence of severe liver dysfunction, (f) progressive jaundice.

In evaluating the degree of liver dysfunction, several facets were constant features of all five cases: (a) progressive jaundice with marked elevation of the serum bilirubin levels, expecially the direct fraction (20-49 mg. per cent); (b) marked elevation of serum alkaline phosphatase (50-90 K.A. units) out of proportion with the direct bilirubin fraction; (c) marked elevation of SGOT; (d) positive thymol turbidity and cephalin flocculation; (e) normal or slightly elevated total proteins, normal albumin and slightly elevated globulin; (f) presence of bilirubinuria and hemoglobinuria without urobilinogenuria.

The differential diagnosis in the above cases rested between infectious hepatitis, homologous serum hepatitis or a variant of cholangiolitic hepa-

titis. Because of the time of onset of jaundice in Cases I, II, and III, ten days to ten weeks after transfusion, the possibility of homologous serum hepatitis was seriously considered. In the instance of Case I (L.V. No. 9771), the donor was recalled for study; no history of previous illnesses, jaundice or contact with a jaundiced patient could be elicited. The serum bilirubin on all units of blood administered was less than 1 mg. per cent. The large majority of cases of jaundice offer little diagnostic difficulty, at least in regard to the initial distinction between medical and surgical jaundice. Many can be diagnosed from the history and physical findings. With the additional aid of direct and indirect Van den Bergh tests and urinary bilirubin and urobilinogen, probably 60-70 per cent of cases can be accurately diagnosed. Of the large list of liver function tests, the cephalin-cholesterol flocculation test and the serum alkaline phosphatase concentration offer the greatest amount of additional information. With their help, the number of successful diagnoses can be increased to 85 per cent or more. Most patients with acute hepatitis will have in the early stage, a positive direct Van den Bergh test, bilirubinuria, increased urinary urobilinogen decreasing as the urinary bilirubin rises, positive cephalin-cholesterol flocculation test and serum alkaline phosphatase concentration between 5 and 10 Bodansky units. On the other hand, most patients with extrahepatic obstruction will have initially a positive direct Van den Bergh test, but no urobilinogenuria, negative cephalin-cholesterol flocculation test, and a serum alkaline phosphatase concentration of about 15 units. Even when the diagnosis will remain in doubt, a liver biopsy will clarify the issue. Most of the cases difficult to diagnose fall into two groups: (a) cholangiolytic hepatitis with minimal or absent liver cell dysfunction and, (b) posthepatic obstruction with secondary hepatic injury.

The findings at autopsy or by biopsy in Cases I, III, IV, and V were not suggestive of homologous serum hepatitis or infectious hepatitis. (No autopsy was allowed in Case II.) It was our feeling that the swollen Kupffer cells engorged by phagocytized erythrocytes plus the agglutinative thrombi in sinusoids resulted in sinusoidal obstruction. It is then highly conceivable that because of local ischemia, coagulation necrosis of liver parenchymal cells could result. Green, Conley and Berthrong[3] have also suggested a similar pathogenesis.

Although most of the cases studied showed some dehydration on admission, an attempt was made to rehydrate the patients. Reference to the hematocrits in the cases studied show little or no evidence of hemoconcentration. If hemoconcentration had occurred because of dehydration, this might well account for the albumin concentrations remaining within normal limits. In these circumstances, the serum globulin concentration would be elevated, whereas without dehydration, there is seldom in acute hepatitis the marked rise in globulin as seen in cirrhosis.

Evidence pointing to a cholangiolytic hepatitis was almost completely lacking as shown by the symptomatology, physical findings, absence of chills, and the autopsy findings.

Although there was little or no fall in the hemoglobin or hematocrit in Cases I, II, III, IV, and V, there is evidence, we believe, that we are dealing with the so-called hyperplastic crisis as described by van Der Sar.[12] Here we have an elevated indirect bilirubin content in the serum, marked leukocytosis, erythroblastosis, reticulocytosis combined with an erythroid hyperplasia in the marrow. In all five cases reported, there was a marked leukocytosis with a shift to the left. This leukemoid reaction was substantiated by marrow examinations in three of the five patients studied. Here the picture was one of extremely hyperplastic marrow, with a reversal of the M:E ratio in the range of 1:1 to 1:4. The highest peripheral count reported in the literature by Henderson and colleagues[4] was 60,000 while in our cases it was 50,000/cu mm. In addition, an excessive number of immature cells were seen in the peripheral blood including a large number of nucleated red cells and an unusually high reticulocyte level (especially Case I—42 per cent). The nonoccurrence of an aplastic crisis is determined by equilibrium between production and destruction. Splenic factors in sickle cell anemia in the age group with which we are dealing do not come into consideration because the spleen in most cases was shriveled and calcified to an insignificant organ by repeated attacks. In all cases under study, there was evidence of blood loss by mouth and rectum. Plasma hemoglobin in the cases under study was only slightly elevated, although in Case II, chromium 51 studies revealed a half-life of three days.

Many of the findings in the cases presented here closely parallel those described by Green *et al.*[3] The serum proteins in all our cases tended to remain within normal limits with some slight elevation of the globulin. The marked elevation of the total serum bilirubin, especially the direct fraction, with absence of urobilinogen from the

urine would tend to suggest an intrahepatic obstructive factor in this disease. As the literature[1, 3, 4, 12] points out, when the direct fraction is elevated, the other liver function tests are also severely disturbed. Such were the findings in our cases. Some of the elevation of the alkaline phosphatase may be attributed to extensive bone infarction, but a multiplicity of x-rays failed to show significant bone changes. The severe disturbance in the SGOT points to excessive hepatic parenchymal destruction. The terminal fall of the SGOT in Case I can be attributed probably to cessation of cell destruction, also to complete utilization of the available cell transaminase. The marked increase in direct reacting bilirubin fraction was associated with the largest and most painful livers; this same observation was made by Bogach *et al.*[1] The severity of the hepatic lesion is also well demonstrated by the elevated thymol turbidity and marked disturbance of the one-stage prothrombin time.

The terminal phase of all these cases was manifested by gradually rising BUN, consistent with the autopsy findings of cholemic nephrosis. Clinically, the deaths were attributable to cholemia, a loose term for terminal coma associated with deep jaundice and severe hepatic dysfunction.

It is of interest that none of the cases demonstrated the hyposthenuria so characteristic of sickle cell anemia, as random specific gravities varied from 1.006 to 1.019. It is our feeling that absence of hyposthenuria may be of some significance in cases of homozygous Hb-S disease who develop this overwhelming form of hepatitis.

SUMMARY

Five cases of sickle cell anemia with severe liver disease are presented. The possibilities of homologous serum hepatitis, infectious hepatitis or anoxic or cholangiolytic hepatitis are considered, but in view of history, physical findings, laboratory and histologic evidence, these possibilities are excluded. The pathogenesis of this type of intrahepatic obstructive disease is discussed. The stasis of sickle erythrocytes and liver sinusoids combined with the swelling of Kupffer cells would lead to varying degrees of ischemia, coagulation necrosis of liver cells and bile stasis. We feel that this type of liver disease is peculiar to sickle cell disease. ★★★

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THE DE-FENDERS

An elderly couple in Texas recognize that they are less than expert drivers. Neatly painted on each of the crumpled two front fenders of the family sedan are, respectively, "his" and "hers."

Bridging the Gap Between Immunology And Allergy in Pediatric Practice

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ALTHOUGH THERE HAS BEEN explosive progress in recent years, it is in considerable measure as true today as in the past that only relatively slender strands of complete knowledge connect the basic sciences of immunology and chemistry on the one hand with the clinical empiricism which gives most current support to the care of allergic patients. We still do not know why people are allergic nor why such tried and true measures as desensitization appear to be helpful. Many feel strongly, moreover, that the successful approach to the problems of the allergic child must be predominantly *historical, educational,* and *supportive* —only secondarily *immunologic.*

It does not seem necessary to review either the importance or content of an adequate allergic history, except to reiterate that the allergic history explores every area of the patient's life, not just for initial evaluation of his allergic condition but continuously and thoughtfully as investigation and therapy proceed.

HISTORY-TAKING

Allergic history-taking is itself an essential educational exercise, for the patient learns where the interests of the physician are focused and learns to view his personal illness in its uniquely personal environmental context. In addition to instruction through history-taking, the physician must convey to his patient the manner in which allergic reactivity is determined by multiple factors, which are genetic, dietary, infectious, inhalant, emotional, pharmacologic, chemical, and physical. If the patient can appreciate that in the development of the allergic symptoms there is a period during which allergic reactivity may have less than threshold values for production of overt symptoms, and if the patient will understand that the levels of subthreshold reactivity which are close to the production of symptoms tend to drift into trouble whereas levels of subthreshold activity remote from symptoms tend to be increasingly well tolerated, then the patient will be able to accept certain living conditions as being likely beneficial, even where they don't seem to be having immediate positive results. These conditions which "lighten the allergic load" are in the general category of prophylaxis, and include such measures as dust control in the bedroom, and a few simple dietary precautions which have been outlined elsewhere.[1]

Despite the progress in recent years, it is still not known why some persons are allergic nor why such tried and true measures as desensitization appear to be helpful. Noting that clinical empiricism still affords the best care for allergic patients, the author discusses the approach to the problems of the allergic child from the historical, educational, supportive, and immunologic standpoints.

It will be of great satisfaction to the physician willing to devote the necessary time for this investigative and educational activity to see that many of his patients are greatly relieved with minimal resort to immunologic techniques. Where immunologic factors do enter into allergic management, they may be either diagnostic or thera-

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peutic. Skin-testing has a time-honored place in the investigation and management of the allergic individual and will be particularly useful where some question exists as to whether vague symptoms in the respiratory tract of a child with recurrent or chronic infections seem likely to have atopic roots. I find that I do many fewer skin tests, however, than was the case some years ago. When a program of desensitization seems likely to be necessary, it seems essential to determine the level of clinical reactivity of the patient to house dust, grasses, trees, ragweed, *Alternaria,* and *Hormodendron,* both to identify allergens to which the patient is exquisitely sensitive and to identify positive reactors likely to be included in a treatment regimen. Skin tests to wheat, egg, and milk, and often other foods, are also commonly done, but are rarely outstandingly useful. When a program of desensitization employing the above antigens has failed to answer the problem of an allergic child, more tests may be in order, always with the reservation that interpretation of skin tests must be cautious. The reality of reagins is not to be doubted, nor is it to be doubted that reagins are related in some ill-defined way to the patient's symptoms. But it appears that they are neither necessary nor sufficient for clinical reactivity, and positive skin tests may reflect past or future or never-to-be clinical reactivity, being only coincidental to current difficulties.

DESENSITIZATION

As we look for new insights which promise to close the gap between immunology and the empiricism of traditional clinical allergy, it is interesting to examine the state of desensitization. It is rather curious that 50 years after its first use there is still no universal agreement as to why or how or even whether desensitization works, what the optimal programs or goals in treatment may be, or even whether there may not be profound and definable differences between patients which render desensitization effective in some and completely useless in others. In the study of Lowell,[2] for example, which seemed to show that desensitization is helpful, the beneficial effects might have been confined to relatively few patients. Opinions regarding the optimal dosage levels for desensitization vary widely, various practitioners gaining maximal benefit from dilutions of antigenic material which vary in concentration from one to one billion or more to one to ten.

In default of any universal agreement in these matters, I will share with you my own feeling that desensitization is an effective way to help many allergic children, that more errors are made through overtreatment than undertreatment, and that some children can be handled with a relatively casual program of injections rather than the rigid weekly program so often adhered to in the past. It seems further likely to me that the coseasonal use of desensitization, using *low levels* of treatment and *intracutaneous* administration of the antigen, seems to have been unfairly neglected. While Johnstone[3] may be right that some children require relatively large doses of allergen in order to get maximal relief from pollinosis, I am satisfied that the majority of children do not need such vigorous treatment and have rarely gone beyond a 1:1,000 concentration of antigen at a dose of 0.2 ml.

NEW TECHNIQUES

So far, in presenting immunologic aspects of childhood allergy, we have not moved very far away from clinical empiricism. But new techniques are soon to be in wide use which may allow a more neatly crystallized appreciation of the immunologic difficulty of many allergic children. These are the techniques of hemagglutination, agar gel diffusion, and passive cutaneous anaphylaxis, as well as refinements of the traditional skin testing procedure using isolated protein antigens of such complex substances as cow's milk.

The extension of these new techniques into the evaluation of the patient with potential or actual clinical allergy is likely both to increase appreciation of what the fundamental nature of allergic disorders is and to reveal in clearer light their heterogeneity. These techniques have been particularly fruitful in the evaluation of clinical reactivity to cow's milk. Heiner[4] found multiple precipitins against cow's milk in a group of children with chronic respiratory disease characterized by cough, dyspnea, wheeze, and an anemia associated with hemoptysis and the expectoration of iron-laden macrophages. In some of these patients gratifying clinical relief followed upon removal of milk from the diet. Some such patients appeared to have an illness identical with idiopathic pulmonary hemosiderosis, but it does not appear that they account for all instances of this clinical syndrome.

In a search among large numbers of children for precipitins against cow's milk, Hinkle[5] found a reactor rate of approximately 1 in 20 and felt that the child with precipitins against cow's milk was particularly likely to have a clinical pattern of recurrent upper respiratory infection, to be underweight, and to have a mild anemia which ap-

peared to be consistent with iron deficiency. When the diets of such children were freed of cow's milk, the titer of precipitins diminished and clinical relief was often found. The precipitins appeared particularly likely to be reactive with bovine serum albumin and bovine gamma globulin, rather than with the lactalbumin or lactoglobulin of milk which have traditionally been thought of as the most likely allergenic proteins.

Reactivity to cow's milk has been further studied by the technique of hemagglutination of tanned cells. Parish[6] has suggested that the sudden death of the otherwise healthy infant may be associated with a high titer of hemagglutinins against cow's milk, and has indicated that when guinea pigs sensitized against cow's milk protein and lightly anesthetized are inoculated with milk or the stomach contents of babies found unexpectedly dead, the death of the animal may occur quickly and quietly without the usual drama of anaphylactic respiratory distress. Others who have tried to substantiate the report of Parish have found no clear relationship between sudden death in infancy and titers of hemagglutinins against cow's milk protein, and it seems likely that if this is a factor it is a relatively minor one. Our own experience with hemagglutinins in normal infants indicates that nearly all babies have reactive substances, but that they may be especially high in infants with probable clinical reactivity to cow's milk.

GOLDMAN STUDY

Evidently these studies define groups of children who do not have atopy in the classical sense in which illness depends upon reactive substances (reagins) without precipitating or agglutinating activity. On the other hand, other studies of cow's milk allergy with classical skin testing techniques have been given new dimensions through the use of isolated milk antigens by increasing numbers of investigators, among whom Goldman, Anderson, Saperstein and others[7] have given us a particularly fine clinical study. In 89 children who appeared to have clinical cow's milk reactivity these investigators have emphasized the importance of the clinical trial in determining reactivity to cow's milk, reiterating once again that the empirical test is the final arbiter. In children with gastrointestinal upset, abdominal pain, asthma, and rhinitis (with rare central nervous system or urticarial responses), they call attention to the relatively early onset (usually under two years) and the 20 per cent spontaneous remission of cow's milk reactivity. Most of their patients clinically reactive to cow's milk had strongly positive skin tests. Only six per cent of normal infant controls gave positive reactions; these were generally weak. Sixty-eight per cent of all allergic children in their experience gave some skin test reaction to milk; this was about the same proportion as those clinically reactive to milk who gave positive reaction (59 per cent). The lack of sharp discrimination in skin test behavior between children generally allergic and those in whom specific allergy to milk was documented by an oral challenge is disappointing and does not offer much in the way of closure to the gap between immunology and clinical allergy. The comparative strength of the skin test reaction helps a bit, but a search for more discriminatory techniques seems in order. It is hopeful that passive cutaneous anaphylaxis may prove more sensitive and perhaps more discriminatory.

NEW POINTS OF VIEW

For me the immediate effect of these new techniques in study of cow's milk reactivity has been to underscore a conviction of many years that cow's milk reactivity is relatively common in children (affecting perhaps 1 per cent of all children), that it is particularly likely to contribute to recurrent upper respiratory infection or perennial allergic rhinitis, sometimes with recurrent otitis media. (Cow's milk reactivity is, further, an occasional cause of behavioral or personality disorders or of the state which has been described as allergic fatigue.) It is not at all clear that these forms of cow's milk reactivity brought into sharper focus through these newer techniques ought to be placed in the same immunologic pigeonhole as the atopic disorders, which have historically been characterized by the presence of the immediate skin test reaction, with reagins demonstrable on passive transfer. But we can be confident that they are immunologic disorders, and we do have the opportunity to acquire new points of view and insights which will sharpen the edge of clinical empiricism. ★★★

St. Christopher's Hospital for Children

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ASTRONOMICAL PROBLEM

The two astronauts were in their sixth day of a space voyage to Venus, a million miles from Earth, when one looked astonished and said to the other, "Whadda you mean, it won't flush?"

Clinicopathological Conference LXII

Conducted by the Department of Pathology
Singing River Hospital
Pascagoula, Mississippi

THIS 24-YEAR-OLD WHITE FEMALE was admitted to the Singing River Hospital on March 24, 1964, with chief complaints of pain, soreness, and stiffness of joints. She was previously admitted to this hospital on March 13, 1964, with similar complaints involving only the knees. At this time laboratory examination including urinalysis, CBC, and VDRL were negative. An ECG was also essentially negative. Her treatment consisted of Panalba, Combiotic, salicylates, and ACTH-Gel.

She was again hospitalized on March 18, 1964, with the same complaints except involving more joints. Again the laboratory workup included CBC, urinalysis, VDRL, and latex fixation. These examinations were negative except for 1 to 3 RBC/hpf and 5 to 10 WBCs per hpf on urinalysis.

On the present admission she complained of soreness and stiffness of joints involving elbows, wrists, hands, knees, ankles, and toes. All the other episodes had been characterized by soreness, stiffness, redness, heat, and swelling of the joints. The arthritis was not migratory in the usual sense in that the process settled in all the above joints for a short time and then disappeared. The patient denied any prior sore throats or other symptomatology except for one episode of "stomach virus" occurring approximately one month prior to the first attack. There was also no history of conjunctivitis, urinary or genital symptomatology, skin reactions, or other signs or symptoms which would suggest etiology.

The patient had been married seven years and had had three uncomplicated pregnancies with the children's ages being 6, 4 and eight months. An appendectomy was done when she was eight or nine years of age. Her father and mother were 49 years of age and were living and well. There was no family history of a similar illness. She was a nonsmoker and rarely drank alcoholic beverages.

On admission the blood pressure was 120/70, pulse 96, respiration 22, and temperature 101.2 degrees. On examination, the eyes, ears, nose, throat, and neck were normal. The lungs were clear to auscultation and percussion. Examination of the breasts was negative. The heart rhythm was normal and regular. There was no clinical cardiomegaly, no rubs or gallops. The abdomen was protuberant, soft, and obese. The liver, spleen, and kidneys were not palpable. The bowel sounds were normal, and there were no areas of tenderness. Examination of the extremities revealed no edema, clubbing, or cyanosis. Pulsations of the radial, femoral, dorsalis pedis, and posterior tibial were full and equal bilaterally. No lymphadenopathy was found. The elbows appeared somewhat swollen and hot and were excrucinatingly tender. The knees were also tender and hot. The ankles appeared red, hot, and swollen. A couple of days following admission raised erythematous nodules were noted over the pretibial regions which were compatible with erythema nodosum.

In the CPC Dr. Milam Cotten discusses the case of a 24-year-old white female, the mother of three children, who presented with a triad of hilar adenopathy, fever, and arthritis accompanied by erythema nodosum. Other discussers are Drs. Paul Moore and C. L. Ezell.

The urinalysis on admission showed a specific gravity of 1.015. The tests for albumin and sugar were negative. The microscopic examination was essentially negative. The hemoglobin was 12.4 gm. The WBC was 11,150 with 77 segmented neutrophils and 23 lymphocytes. The hematocrit was 38 vol. per cent. The platelet count was 512,000 per cm. The corrected ESR was 45 mm. in 60 minutes. The CO^2 combining power was 23.1 mEq/l; chlorides, 757 mg. per cent; potassium, 4.8

mEq/l; protein 6.95 gm. per cent with 4.1 gm. albumin and 2.85 gm. per cent globulin. The BUN was 14.7 mg. per cent. The enteric febrile agglutinations were negative as well as the RA latex and ASO, which was 10 Todd Units. Three consecutive LE preparations were negative. On April 1, 1964, the cholesterol was 177 mg. per cent; thymol turbidity was 0.5 units; SGPT 8 units. The direct van den Bergh test showed negative bilirubin at 1, 10, and 30 minutes. The indirect was 0.5 mg. per cent. Cephalin flocculation was negative at 48 hours. Throat culture yielded an abundant growth of alpha streptococcus. On April 4, 1964, the hemoglobin was 10.4 gm. The WBC was 6,800 with 71 segmented neutrophils, 28 lymphocytes, and 1 monocyte. Examination of the stool for ova and parasites was negative. A bone marrow study on April 1, 1964, was essentially normal showing only a slight shift to left in erythroid and granulocytic series with 3 per cent plasma cells. Serum pherogram on March 31, 1964, showed a "nonspecific pattern (chronic infection?) hypersensitivity state?" On this the albumin was 3.6 gm. per cent, A-1 0.37, A-2 0.95, B 0.88, G 1.31.

X-rays of both shoulders, right elbow, wrist, and hand were normal. An x-ray of the chest showed it to be normal in size and contour. The hilar shadows were slightly prominent and exhibited insignificant calcifications on both sides. The aorta appeared small, but there was a slight prominence of the right side of the superior mediastinum raising the question of adenopathy. Further x-rays of the pelvis, hips, knees, ankles, and feet were considered normal. An examination of the chest by fluoroscopy and EPA lateral and upright views again demonstrated the hilar calcification and a small mass shadow projecting from the right side of the superior mediastinum just below the level of the clavicle. The mass was to the right and anterior to the trachea and produced no deformity. On April 3, 1964, a liver biopsy was done and on April 6, 1964, a scalene biopsy was taken.

CLINICAL DISCUSSION

Dr. Milam Cotten: "In order to present this rather detailed and interesting protocol in a systematic manner, I would like to summarize it in the following sequence. This case represents the malady of a 24-year-old white female mother who apparently became ill initially on Feb. 13, 1964, when at that time she had 'a stomach virus,' the symptoms and treatment of which are unknown to this examiner. Probably this did not have anything to do with her subsequent illness.

"She was hospitalized for the first time on March 13, 1964, complaining of stiffness, soreness, and pain in the knees only. Laboratory examination at that time was normal. She was treated with Panalba, Combiotic, salicylates, and ACTH-Gel. Apparently this was treated as an infective process, although no fluctuation or evidence of aspiration of pus is presented in the protocol. She was discharged on a date which is not presented but then was rehospitalized on March 18, 1964, with the same complaint; however, more joints were involved. Laboratory examination at that time was completely normal and treatment is not stated in the protocol. She was discharged on a date that is not stated.

"The patient was hospitalized for the third time on March 27, 1964, complaining of stiffness, soreness, pain in multiple large joints which was characterized by redness, heat, swelling, and also simultaneous involvement. The remainder of the physical examination was apparently normal except for fever. X-rays were normal except for a right hilar mass. The joint complaints disappeared after a short while; however, it is pertinent to note that on March 29, 1964, she developed lesions described as erythema nodosum. She was extensively studied laboratory-wise and also had a number of diagnostic procedures including a bone marrow examination, liver biopsy, and scalene node biopsy, through which I believe a definitive diagnosis was confirmed. Succinctly stated, this malady represents an interesting diagnostic triad, namely arthritis, hilar adenopathy, and erythema nodosum.

"Before proceeding to the differential diagnosis, I would like to make a few comments on the protocol which is rather complete, but yet leads one to desire the answer to a number of questions. Those that interest me included the birth place of the individual, any recent travel, any type of employment where she is exposed to any type of particular disease, general appearance of the patient, does she appear ill, was she apparently overweight and not chronically ill? Had she had any serious illness during her life such as rheumatic fever? Was this illness indeed of rather abrupt onset, or had it been of an insidious course? Had she had a similar illness previously? Did she have any allergies? What were the results of skin tests, uric acid determination, blood calcium and blood cultures? What did repeat ECG's, if any, show? What were the results of a possible Kveim test? Why was she anemic, dropping in one week from a hemoglobin of 12.4 to 10.4 gm. I might add that the most likely cause for this drop in hemoglobin was due to the quantity of blood that was needed

to perform all of the multitude of tests that this patient experienced during such a short hospitalization.

"In summary of the lab work that was performed on this patient, the first admission included a normal urinalysis, CBC, and VDRL, and a normal ECG. On the second admission, lab work included a normal CBC, urinalysis, VDRL, and latex fixation. I would tend to discount the urinalysis findings of 3 RBC/hpf and 5-10 WBC/hpf since this is essentially within normal limits, and I imagine that this represented a voided urinalysis. On the third admission urinalysis was normal, CBC on admission showed a hemoglobin of 12.4 gm., a slightly elevated WBC and normal platelet count. The ESR was definitely elevated, being recorded as 45 mm. in 60 minutes whereas this was probably a Wintrobe which is normal 0-14 mm. per hour. Blood chemistries, total protein, A/G ratio, BUN were all normal; enteric febrile agglutination, RA latex tests were normal, ASO was normal at 10 and LE preps × 3 were negative. Liver battery tests were normal and throat culture revealed only alpha strep. Repeat hemoglobin one week after admission revealed 10.4 gm. with a normal WBC. Bone marrow examination was normal. Stool for ova, cysts, and parasites was negative. The results of a stool exam for occult blood is not presented. This, of course, could be considered as one of the causes for the drop in hemoglobin, but I rather think that as stated previously this was the result of multiple, probably 50 cc. syringe type, withdrawals from the antecubital space. Serum pherogram indicated a nonspecific pattern with possible chronic infection of a hypersensitive state.

"In my final remarks on the protocol I would like to say a few words about the description of erythema nodosum. Erythema nodosa are usually red tender nodules in the skin and subcutaneous areas, usually over the pretibial region and characteristically do not ulcerate. This is not a disease in itself, of course, but usually a manifestation of an underlying condition. The underlying condition, however, is frequently not diagnosed. Things to consider in a person that has erythema nodosum include tuberculosis, streptococcal infections, leprosy, whooping cough, measles, histoplasmosis, coccidioidomycosis, gonorrhea, syphillis, sarcoidosis, sensitivity reaction to iodine, sulfanilamide, bromide, and salicylic acid.

"The exact percentage of the most likely underlying conditions varies with geography. For instance, in New England the most common cause is a streptococcal pharyngitis, in the San Joaquin Valley of California the most likely cause is coccidioidomycosis, and in the Scandinavian countries, the most likely cause is tuberculosis. I could not find a reference in any of the textbooks that I examined; however, I have seen one case of resistant erythema which was also accompanied by resistant hookworm infestation in a 17-year-old white female. This hookworm infestation was quite resistant to treat and after three separate treatments of tetrachloroethylene still showed evidence of infestation. I assumed that this represented a sensitivity reaction to the hookworm disease. At this time, I would like to have Dr. Paul Moore present the findings of the x-rays that were obtained on this patient."

X-RAY DATA

Dr. Paul Moore: "The initial chest film revealed the bony thorax to be intact (Figure 1). The lung fields were clear without evidence of consolidation, infiltration, or pleural diffusion. A

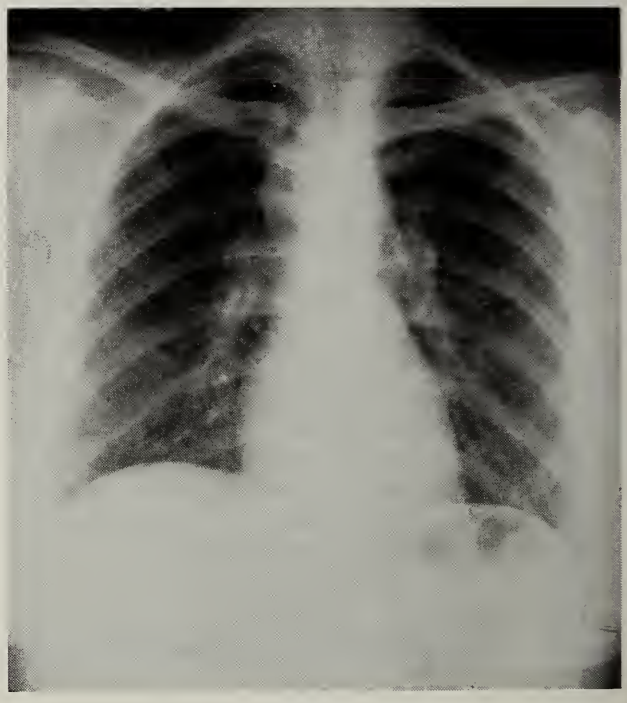


Figure 1

mass presumed to be a node was located at the angle between the trachea and right main stem bronchus. This is referred to at times as the azygos node. Lateral films revealed no evidence of involvement of other nodal groups. The cardiopericardial silhouette was within normal limits. Due to the patient's joint pain and minimal swelling, joint surveys were obtained which revealed no evidence of bone destruction. The articulating cartilages were intact throughout. In a young individual these x-ray findings are suggestive of

several things. Certainly, I think the two most common ones radiographically, that a distinction must be made between, would be sarcoidosis and lymphoma. With the joint pain and rash, certainly the former would be the most likely diagnosis. Radiographically, sarcoidosis falls into three patterns:

1. Parenchymal changes
2. Lymphadenopathy
3. Combination of 1 and 2."

DIFFERENTIAL DIAGNOSIS

Dr. Cotten: "In order to differentially diagnose this case, I would like to divide it into several categories, leading from the most unlikely up to the most likely.

"Category A—Mentioned only to rule out

"Hypertrophic arthritis. Although this case is primarily a case of arthritis, it certainly is not in the age groups nor does it exhibit x-ray findings that are compatible with this diagnosis; therefore, it can easily be eliminated.

"Suppurative arthritis. This is interesting in the sense that arthritis and fever are present; however, this is simultaneous involvement of many joints which is unlikely for suppurative arthritis. It is interesting that multiple antibiotics were administered on the first admission. No mention is made of fluctuation or any aspiration of purulent material, so I would rule out this diagnosis because of insufficient data.

"Gout. This again is interesting, although it is not typical of the presentation of gout. With the many joint involvements and without uric acid determination, I think this is inconsistent with the diagnosis of gout.

"Tuberculosis. I think tuberculosis has to be considered in any type of case such as this, although this is not typical of tuberculous arthritis. Since this is multiple joints and without positive results of skin tests or other evidence of tuberculosis, I would eliminate this as a diagnosis.

"Gonococcal arthritis. Gonococcal arthritis is usually a single joint involvement, and although I have no way to eliminate the diagnosis of gonorrhea (in fact, the pelvic findings were not presented in the protocol), I would eliminate this because of the incompatible nature of the overall malady.

"Serum sickness. I have no way or anything to relate this to as far as recent injections or allergies, although I think that with this type of history and findings and with the electrophoresis possibly indicating some type of 'hypersensitivity state,' it should be mentioned. I will rule it out at this time, because of insufficient information.

"Category B—Possible but unlikely

"Systemic Lupus Erythematosis. In favor of this diagnosis are only two things: the arthritis which is somewhat atypical and the fact that she is a female in the child bearing age. However, I think that this diagnosis can be eliminated on essentially three counts: namely, three negative LE cell preps, no typical butterfly lesion over the face (although this is present in less than one-half of the patients with systemic lupus erythematosis), and normal erythropoiesis.

"Category C—Cannot be completely ruled out, but rather unlikely

"Rheumatoid arthritis. In favor of this diagnosis is the proper sex, proper age group, anemia (which I assume is iatrogenic), and pain and stiffness in joints. Rheumatoid arthritis may present as an acute illness with multiple joint involvement, fever, chills, and prostration; however, against the diagnosis of rheumatoid arthritis in this case is the fact that she had no subcutaneous nodules over the bony prominences, a negative latex fixation test, the lack of an insiduous onset, and the fact that atypical joints are involved.

"Rheumatic fever. This illness could explain all of the presented findings. In accordance with the modified Jones criteria for the diagnosis of rheumatic fever, of the five major criteria, namely, carditis, polyarthritis, chorea, subcutaneous nodules, and erythema marginata, one (polyarthritis) is present. Of the six minor criteria, namely, fever, arthralgia, prolonged PR interval in the ECG, increased ESR, WBC, C-reactive protein or preceding beta hemolytic streptococcal infection, and a previous rheumatic fever or inactive rheumatic heart, two, fever and increasing ESR and WBC, are present. Now, according to Jones criteria, the presence of two major and one minor or one major and two minor criteria indicate a high probability of rheumatic fever. This is one of the situations where, categorically, in as far as criteria are concerned, one and two minor criteria present, rheumatic fever definitely has to be considered. However, the fact that the remainder of the major and minor criteria are lacking and the single major criterion is slightly atypical mitigates against the diagnosis of rheumatic fever. I think it is interesting to speculate on the possibility that some of these findings had been modified by the injection of an unstated amount of ACTH-Gel at the time of the first admission. I do not know how much this would have influenced some of these findings that were presented in the lab work, but it certainly is a factor to consider. The diagnosis of rheumatic fever remains a definite possibility in

the differential diagnosis of this case that cannot be eliminated.

"**Coccidioidomycosis.** I think this is indeed an interesting possibility, by the fact that in favor of this diagnosis is arthritis, fever, erythema nodosum, hilar adenopathy, peritracheal lymph node enlargement, increased ESR, and, of course, the fact that this is a CPC. Now, against this diagnosis is the lack of a definite exposure, lack of a skin test, and culture report. Some questions of interest would be: Had she any recent travel to the desert areas of California, such as the San Joaquin Valley, Utah, Texas, Arizona, New Mexico, Northern Argentina, and Paraquay within the past few weeks? What were the results of the skin tests? Had she any employment where she could have possibly have contacted this disease? Strictly speaking, this diagnosis cannot be eliminated from the presented data, although I am going to present what I think to be a better possibility.

"**Category D—Most likely diagnosis**

"**Sarcoidosis.** In favor of this diagnosis is the fever, arthritis, hilar adenopathy, erythema nodosum, increased ESR rate, proper age group and sex. This could well fit into the syndrome known as the primary sarcoid syndrome that occurs in Britain and in the Scandinavian countries, which is characterized by these exact findings in a 20 to 30-year-old female and may coincide with lactation. Really, there is nothing that completely mitigates against this diagnosis. Some questions of interest would be: Did the liver biopsy and scalene node biopsy reveal typical tubercules? What were the results of the tuberculin skin test? Usually in sarcoidosis the skin test is always negative for the TB antigen. What was the result of the Kveim skin test? The Kveim test is the antigenic skin test prepared from a suspension of a definite sarcoid nodule which is injected into the skin and four to six weeks later a biopsy is taken from the skin test area. If this reveals the typical epithelioid cell tubercules with little or no necrosis, then the results are positive and specific for sarcoidosis. What was the blood calcium? Frequently in sarcoidosis there is a hypercalcemia, although corticosteroid can result in normal calcium levels and, here again, I think the ACTH-Gel could be a factor that would possibly make the calcium in the blood stream normal.

"So, in the final evaluation of this case, the patient certainly presents all findings that could go along with either coccidioidomycosis or sarcoidosis, and in view of the fact that this is a CPC, perhaps the better diagnosis would be the more unlikely, which of the two is coccidioidomycosis. However, I am going to be more of a conformist; therefore, my final clinical diagnosis is sarcoidosis."

PATHOLOGICAL DISCUSSION

Dr. C. L. Ezell: "Dr. Cotten has given a most exacting discussion in pinpointing this entity. He has stressed the importance of suspecting sarcoidosis when presented with erythema nodosum and an accompanying triad of hilar adenopathy, fever, and arthritis in a young female. Also, as demonstrated in this case, clinical laboratory data is usually of little help in making the diagnosis, the abnormal changes being of a general nonspecific nature. There is frequently a mild anemia and an increasing ESR. The drop in hemoglobin of 12.4 gm. to 10.4 gm. in this patient could well be due, as Dr. Cotten suggested, to laboratory exsanguination. Although, as indicated in the discussion, these patients may have hypercalciuria with or without hypercalcemia and occasionally the alkaline phosphatase may be elevated. The latter was normal in this case and calcium not determined. Hyperglobulinemia, usually the result of an increase in gamma and alpha 2, is sometimes



Figure 2

present. This was of some little help in this case, the alpha 2 being 0.95 gm. per cent (normal range 0.5 to 0.9) and the gamma fraction 1.31 gm. per cent (normal 0.7 to 1.7). The Kveim reaction which is reported positive in 60 to 80 per cent of the cases in sarcoidosis was not done in this case.

"The liver biopsy was negative. Histologic sections of the scalene node showed extensive replacement of the nodal architecture by multiple thickly spaced noncaseating epitheloid tubercles with fairly frequent Langhan's giant cells (Figure 2). Although this picture is characteristic of Boeck's sarcoid, it is well appreciated that this lesion can at times be indistinguishable from nodes involved by histoplasmosis or nodes draining a neoplasm. Special stains for acid fast and fungal organisms were negative."

Clinical Diagnosis: Sarcoidosis.

Pathological Diagnosis: Boeck's Sarcoid. ★★★

NO TIME FOR SERGEANTS

"So you're getting discharged," snarled the crusty old sergeant, "and I suppose that after you get out you'll just be waiting for me to die so you can come and stamp on my grave?"

"Naw, Sarge," replied the private. "When I get out of this here Army, I ain't never going to stand in line again."

Radiologic Seminar XXXVI: Granulomatous Colitis

W. HOWARD COOPER, III, M.D.
Jackson, Mississippi

SINCE THE ORIGINAL description of regional ileitis by Crohn, Ginzburg, and Oppenheimer in 1932, it has become obvious that this disease process is not confined to the terminal ileum but involves other parts of the small bowel in many cases. Some of these patients have involvement of the colon with the granulomatous process. It is perhaps less well recognized that granulomatous disease can begin in, or be confined to, the colon. It is also now apparent that idiopathic ulcerative colitis is rarely seen in association with granulomatous enteritis. Forty-four patients with granulomatous colitis were recently reported from Mount Sinai Hospital in New York. In seven of these cases, the disease was confined to the colon and in the other 37 there was granulomatous disease of both the colon and small bowel. Granulomatous colitis seems to have received earlier recognition and wider acceptance in England, where it is referred to as Crohn's disease of the colon. The report of 15 cases from the Karolinska Children's Clinic in Sweden during a four-year period has suggested that the disease is much more common in children than was formerly suspected.

The gross pathological findings consist of marked thickening of the bowel wall, predominantly right-sided involvement, skip areas with intervening areas of normal bowel, longitudinal ulcerations, and stricture formation. Microscopically a chronic inflammatory reaction with edema and fibrosis involving all layers of the bowel wall is seen. The principal diagnostic finding is the presence of noncaseating granulomas containing epithelioid cells and multinuclear giant cells.

The number of cases reported and the duration of observation are not yet sufficient to clearly outline the clinical course and prognosis of granulomatous colitis. The Mount Sinai group has emphasized the relative infrequency of profuse rectal bleeding in this condition, in contrast to ulcerative colitis. Fistulas are more common in gran-



Figure 1. The pre-evacuation film gives an excellent demonstration of the skip areas of involvement by the disease process. There are marked inflammatory changes in the cecum and ascending colon and also the proximal transverse colon. There is an abrupt change from abnormal to normal bowel in the proximal transverse colon near the hepatic flexure. The distal transverse colon has a normal appearance. There is also considerable involvement in the descending colon with relative sparing of the sigmoid and rectum. The transverse fissures are well illustrated in the lower descending colon.

Sponsored by the Mississippi Radiological Society.
From the Department of Radiology, Mississippi Baptist Hospital.

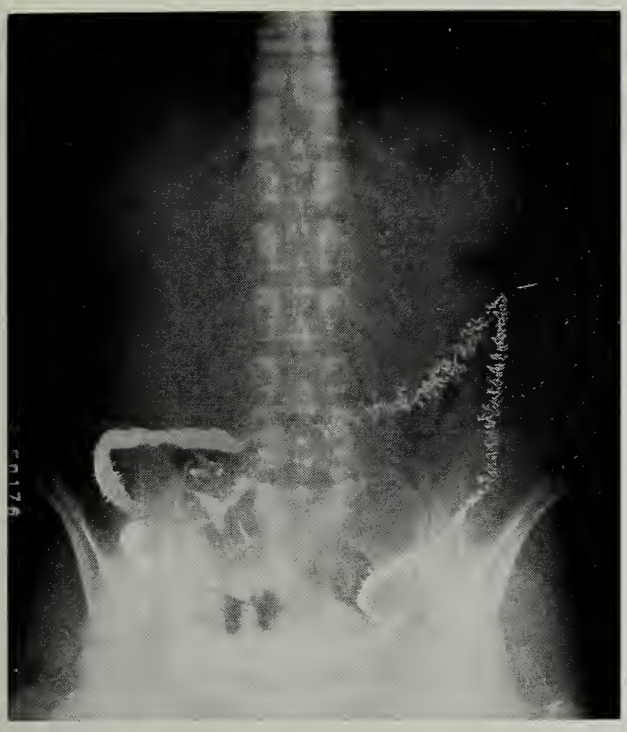


Figure 2. The post-evacuation film also shows the skip areas of involvement. In addition, linear ulcerations can be noted in the involved portion of the transverse colon. Although not well shown, definite involvement of the terminal ileum by the disease process can be noted on this study. The mucosal pattern in the distal transverse colon is normal in appearance.

ulomatous than in ulcerative colitis. There appears to be a tendency toward involvement of a relatively young age group in granulomatous colitis, but this is not very helpful in the differential diagnosis. An important differential point is that there is no increased incidence of carcinoma of the colon in patients with granulomatous disease, whereas the incidence of carcinoma in ulcerative colitis has been reported to be about 3.5 per cent (various reports list it as 0.7 to 11 per cent). Toxic dilatation of the colon has not been reported in granulomatous colitis. There is apparently no increased incidence of perforation of the colon. Some authors have noted a gradual onset of the disease which is often followed by continuous, progressive course with only brief periods free of symptoms.

The radiographic picture of granulomatous colitis has been clearly described in several reports. It is usually possible to make a positive x-ray diagnosis, although in some cases it may be impossible to distinguish from ulcerative colitis. There is often segmental involvement of the colon by the disease process, and the right side of the colon is most frequently affected. The rectum and sigmoid are usually, but not always, spared. The entire colon may be involved, but more often skip areas are a conspicuous feature of the disease. There is usually a sharp demarcation between the normal and the adjacent diseased bowel. Eccentric involvement of the bowel wall, longitudinal ulcers, transverse fissures, pseudopolyposis, and stricture formation are commonly seen.

Rudhe has emphasized the importance of exaggerated haustral markings in children with the disease, resembling the sacculations of the colon seen in scleroderma. This was usually most marked in the transverse and descending colon. In some patients continued observation showed the more typical features of the disease developed later in areas which had previously shown the exaggerated haustral pattern when first seen, but were not then involved. Since many of these patients have granulomatous enteritis, it is necessary to perform a small bowel series on all of them. ★★★

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3. Lindner, A. E.; Marshak, R. H.; Wolf, B. S., and Janowitz, H. D.: Granulomatous Colitis: A Clinical Study, New England J. Med. 269-379 (Aug. 22) 1963.
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5. Rudhe, U., and Keats, T. E.: Granulomatous Colitis in Children, Radiology 84:24 (Jan.) 1965.
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DOGGONE DIFFERENT

And then there was the man who dared to be different: He had a large greyhound with a bus painted on its sides.

TRUSTEES, COUNCILS, AND COMMITTEES

BOARD OF TRUSTEES

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Omar Simmons, Newton (1966)
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G. Swink Hicks, Natchez (1967)
W. J. Weatherford, Pascagoula (1967)

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R. J. Field, Jr., Centreville (1967)
James T. Thompson, Moss Point (1967)

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Ralph Sneed, Jackson, EENT
Max L. Pharr, Jackson, GP
F. Earl Fyke, Jr., Jackson, Medicine
John T. Kitchings, Jackson, Ob-Gyn
Maria J. Mangold, Yazoo City, Pediatrics
W. E. Noblin, Jr., Jackson, Preventive Medicine
R. J. Field, Jr., Centreville, Surgery

97th Annual Session

Mississippi State Medical Association
Biloxi, May 10-13, 1965

MISSISSIPPI'S RIVIERA, the fabulous Gulf Coast, will be the site of the association's 97th Annual Session, May 10-13, 1965. The four consecutive days of intensive postgraduate professional education and recreation offer members, guests, and the Woman's Auxiliary eight general scientific sessions including a special program feature, almost a score of specialty society meetings and meal occasions, a special evening of fellowship and fun, and a bonanza of the Coast resort atmosphere.

The Woman's Auxiliary will conduct its 42nd Annual Session on May 11 with preconvention activities scheduled for the preceding day. Highlight of the ladies' meet will be the Tuesday luncheon when Dr. Jack Schreiber of Canfield, Ohio, the featured speaker, Mrs. Richard A. Sutter, AMA Auxiliary president-elect, and Mrs. Jordan Kelling, Southern Medical Auxiliary president, will be honored. Mrs. Thomas J. Safley of Jackson is president, and Mrs. J. Hurd Gaddy of Long Beach is president-elect. General chairman for the Auxiliary session is Mrs. Wallace Sekul of Biloxi.

Dr. Omar Simmons of Newton, association president, will address the House of Delegates when it meets on May 10 as the opening activity of the four day convocation. Also appearing will be the special speaker, Dr. Donovan F. Ward of Dubuque, Iowa, president of the American Medical Association. The adjourned meeting of the House is set for May 13 when final action will be taken on reports and resolutions and 1965-66 officers are elected. Dr. Everett H. Crawford of Tylertown will be inaugurated president at the session's close.

Noncompeting general scientific sessions have been arranged by the seven formal sections. A unique feature presentation will be made Wednesday morning when the celebrated Drs. J. B. and Louisa E. Rhine of Duke University conduct a Symposium on Parapsychology. Subject areas of the general sessions will cover medicine, surgery, obstetrics and gynecology, preventive medicine, ophthalmology and otolaryngology, general practice, and pediatrics. A Seminar on Thyrotoxicosis will be presented May 11.

Recreational fare includes the social highlight on Wednesday, a Hawaiian Luau which succeeds the formal banquet. Medical alumni from Ole Miss, Tennessee, and Tulane have arranged evening fellowship and banquet occasions. A golf tournament at the Sunkist Country Club is planned.

The 1965 Technical and Scientific exhibits will be presented in the Buena Vista's Hurricane Rooms, immediately adjacent to the main meeting auditorium. All program planning and organization have been under the supervision of the Council on Scientific Assembly. Dr. James L. Royals of Jackson, association secretary-treasurer, is chairman of the group.

OFFICIAL CALL

To all members of the Mississippi State Medical Association:

The 97th Annual Session of the Mississippi State Medical Association is called to meet at Biloxi, Mississippi, on Monday, May 10, 1965, pursuant to Article V of the constitution. The House of Delegates will be convened at 1:30 o'clock p.m. at the Hotel Buena Vista.

The Scientific Assembly, consisting of the general sessions and a Symposium on Parapsychology, will meet during the period May 11-13, 1965.

No member or guest will be permitted to participate in any aspect of the annual session until regularly registered.

OMAR SIMMONS
PRESIDENT

JAMES L. ROYALS
SECRETARY-TREASURER

STATE OFFICERS 1964-65



Dr. Crawford

President
Omer Simmons, M.D.
Newton

President-Elect
Everett H. Crawford, M.D.
Tylertown

Secretary-Treasurer
James L. Royals, M.D.
Jackson



Dr. Simmons

Vice Presidents	Rhea L. Wyatt, M.D., Holly Springs Paul B. Brumby, M.D., Lexington W. W. Walley, M.D., Waynesboro
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Speaker	Howard A. Nelson, M.D., Greenwood
Vice Speaker	William E. Lotterhos, M.D., Jackson
AMA Delegates	J. P. Culpepper, Jr., M.D., Hattiesburg George E. Twente, M.D., Jackson
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Assistant Executive Secretary	Charles L. Mathews, Jackson

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W. E. Moak, M.D., Richton

Everett H. Crawford, M.D., Tylertown

PAST PRESIDENTS

1914-1915 J. S. Ullman, M.D., Natchez

1931-1932 J. C. Culley, M.D., Oxford

1940-1941 William H. Anderson, M.D., Booneville

1941-1942 A. Street, M.D., Vicksburg

1942-1943 H. Lowry Rush, Sr., M.D., Meridian

1943-1944 E. Leroy Wilkins, M.D., Clarksdale

1946-1947 J. K. Avent, Sr., M.D., Grenada

1948-1949 R. B. Caldwell, M.D., Baldwyn

1949-1950 B. B. O'Mara, M.D., Biloxi

1950-1951 B. S. Guyton, M.D., Oxford

1951-1952 James Grant Thompson, M.D., Jackson

1952-1953 Lamar Arrington, M.D., Meridian

1953-1954 M. Q. Ewing, M.D., Amory

1955-1956 S. Lamar Bailey, M.D., Kosciusko

1956-1957 H. C. Ricks, M.D., Jackson

1957-1958 Howard A. Nelson, M.D., Greenwood

1958-1959 Guy T. Vise, M.D., Meridian

1959-1960 Stanley A. Hill, M.D., Corinth

1960-1961 G. Swink Hicks, M.D., Natchez

1961-1962 Lawrence W. Long, M.D., Jackson

1962-1963 C. P. Crenshaw, M.D., Collins

1963-1964 John G. Archer, M.D., Greenville

ACTIVITIES CALENDAR

REGISTRATION

General registration for the Scientific Assembly and House of Delegates will be located in the Hurricane Foyer of the Buena Vista. No person will be admitted to any activity of the Annual Session without first registering. The Secretary's Office will be located in Rooms 142-144, the Buena Vista. Hours of registration are: May 10, 9:00 a.m. to 5:00 p.m.; May 11, 8:00 a.m. to 5:00 p.m.; May 12, 8:00 a.m. to 5:00 p.m.; May 13, 8:00 a.m. to 2:00 p.m.

MONDAY, MAY 10, 1965

8:30 a.m.	Miss. Association of Pathologists, Gold Room Center
9:30 a.m.	Miss. Commission on Hospital Care, Fiesta Room
10:00 a.m.	American College of Surgeons, Gold Room South
12:00 noon	American College of Surgeons Luncheon, Poolside Room
12:00 noon	Miss. Orthopaedic Society, Broadwater Beach Hotel
1:30 p.m.	House of Delegates, Fountain Terrace
3:30 p.m.	Woman's Auxiliary, Preconvention Executive Board, Card Room
4:00 p.m.	University of Mississippi Medical Alumni, Business Meeting, Sun Room
6:00 p.m.	Miss. Association of Pathologists Fellowship Hour and Banquet, Gold Room South
7:00 p.m.	University of Mississippi Medical Alumni, Fellowship Hour and Patio Buffet, Motel Pool Area

TUESDAY, MAY 11, 1965

7:30 a.m.	Woman's Auxiliary, Continental Breakfast, All Auxiliary Members, Gold Room Center
8:30 a.m.	Woman's Auxiliary, General Session, Gold Room Center
9:00 a.m.	Conference on Athletic Injuries, American College of Surgeons, Trauma Committee, Sky Lounge
9:00 a.m.	General Scientific Session, Hurricane Room E
10:00 a.m.	Reference Committee on Reports of Officers and Board of Trustees, Card Room
11:45 a.m.	International College of Surgeons Luncheon, Poolside Room
12:00 noon	Miss. Ob-Gyn Society Fellowship Hour and Luncheon, Gold Room South
12:00 noon	Fifty Year Club Luncheon, Fiesta Room

12:15 p.m. Miss. Society of Internal Medicine Luncheon, Sun Room
12:30 p.m. Woman's Auxiliary Luncheon, Fountain Terrace
1:30 p.m. General Scientific Session, Hurricane Room E
2:00 p.m. Reference Committee on Medical Practices, Gold Room Center
2:00 p.m. Council on Constitution and By-Laws, Card Room
3:00 p.m. Miss. Diabetes Association, Fiesta Room
4:00 p.m. Woman's Auxiliary, Postconvention Executive Board, Card Room
7:00 p.m. University of Tennessee Medical Alumni, Fellowship Hour and Banquet, Fountain Terrace
7:00 p.m. The Tulane University Medical Alumni, Fellowship Hour and Banquet, Sun Room

WEDNESDAY, MAY 12, 1965

7:30 a.m. Past Presidents' Breakfast, MSMA, Poolside Room
8:00 a.m. Past Presidents' Breakfast, Woman's Auxiliary, Sun Room
9:30 a.m. Symposium on Parapsychology, Gold Room Center and South
12:00 noon Flying Physicians Association Luncheon, Sun Room
1:00 p.m. Miss. Psychiatric Society, Fiesta Room
2:00 p.m. Reference Committee on Miscellaneous Business, Fountain Terrace
2:00 p.m. Nominating Committee, MSMA, Open Session, Card Room
2:30 p.m. General Scientific Session, Hurricane Room E
6:30 p.m. Hawaiian Luau, All Members and Guests, Gold Room North, Center, South and Fountain Terrace, Dancing After

THURSDAY, MAY 13, 1965

8:00 a.m. Southern Medical Association Breakfast, Poolside Room (By Invitation)
9:30 a.m. General Session on Pediatrics, Hurricane Room E
9:30 a.m. General Session on Eye, Ear, Nose, and Throat, Sun Room
12:00 noon Miss. Academy of General Practice Luncheon, Gold Room South
12:30 p.m. Section on EENT Luncheon and Business Meeting, Miss. EENT Association, Poolside Room
1:30 p.m. House of Delegates, Fountain Terrace

GOLF TOURNAMENT

The annual association golf tournament will be conducted at the Sunkist Country Club, Wednesday, May 12, Dr. A. V. Hays of Gulfport, chairman. The $10 entrance fee includes one green fee ticket, two 19th hole refreshment tickets, and the Tournament Clubhouse Social Hour, 5 to 6 p.m., May 12, when awards will be made. Handicaps are not needed, the two flights being divided among those over and under 55 years of age. Advance registration is encouraged, sending name and fee to Dr. Hays at P.O. Box 1018, Gulfport. Tuesday rounds are acceptable for the single round 18 hole play. Preregistrants may pick up tickets at the pro shop; others, at general registration. Club facilities are available to players' families.

ANNUAL ASSOCIATION PARTY AND DANCE

Taking the luau theme from the 50th state of Hawaii, the annual association party will spark a new note of informality as members, their ladies, and guests meet in the Gold Rooms, North, Center, and South, and the Fountain Terrace Room, adjoining, on Wednesday evening, May 12, at 6:30 p.m. There will be entertainment during the luau, and Jerry Lane and his Orchestra will furnish dance music afterward. Tickets will be available at general registration.

OLE MISS MEDICAL ALUMNI

University of Mississippi medical alumni will meet on Monday, May 10. Arrangements for registration at the Buena Vista have been made by Alumni officials. The Nominating Committee will meet for luncheon at 12:00 noon in Dr. James G. Thompson's suite. A general business meeting will be held in the Sun Room at 4:00 p.m. A fellowship hour, buffet supper, and dance will be conducted at the Buena Vista Motel's pool area beginning at 7:00 p.m., Dr. B. B. O'Mara of Biloxi, president, presiding. Details and tickets may be obtained from Mr. Charles W. Price, medical alumni secretary, at the University of Mississippi School of Medicine, Jackson.

EXECUTIVE BUSINESS



DR. NELSON

HOUSE OF DELEGATES

Monday, May 10, 1965
1:30 p.m.

The Buena Vista
Fountain Terrace

Howard A. Nelson,
Greenwood, Speaker

William E. Lotterhos,
Jackson, Vice Speaker



DR. LOTTERHOS

MEETINGS OF THE HOUSE

The meeting will be opened by the President, and the Speaker, in presiding over the House, will announce the order of business. An open session, Monday, May 10, 1965, to which all members and Auxiliary members are invited will feature the Address of the President, Dr. Omar Simmons, and a special address by Dr. Donovan F. Ward, president of the American Medical Association. The adjourned meeting of the House will convene in the Fountain Terrace at 1:30 p.m. on Thursday, May 13.

REFERENCE COMMITTEES

Reports of Officers and Board of Trustees, Tuesday, May 11, Card Room, 10:00 a.m.

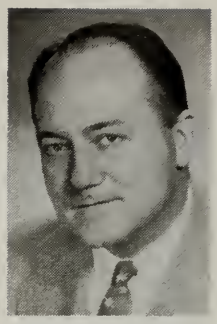
Medical Practices, Tuesday, May 11, Gold Room Center, 2:00 p.m.

Constitution and By-Laws, Tuesday, May 11, Card Room, 2:00 p.m.

Miscellaneous Business, Wednesday, May 12, Fountain Terrace, 2:00 p.m.

Nominating Committee, Wednesday, May 12, Card Room, 2:00 p.m.

THE SCIENTIFIC ASSEMBLY



Dr. Royals

COUNCIL ON SCIENTIFIC ASSEMBLY

James L. Royals, M.D., Chairman

THE COUNCIL

R. J. Field, Jr., Surgery

W. E. Noblin, Jr., Preventive Medicine

Maria J. Mangold, Pediatrics

John T. Kitchings, Ob-Gyn

F. Earl Fyke, Medicine

Max L. Pharr, General Practice

Ralph Sneed, EENT

THE SCIENTIFIC EXHIBIT

Hurricane Room D
The Buena Vista

THE TECHNICAL EXHIBIT

Hurricane Rooms A-C
The Buena Vista

CONDUCT OF THE SCIENTIFIC ASSEMBLY

The order of exercise, papers, and discussion as set forth in the official program shall be followed until completion. All papers read before the association shall become its property. Each paper must be read by its author and deposited with the Secretary (or Chairman) when read.

THE SCIENTIFIC EXHIBIT

Physicians, foundations, and organizations will present the Scientific Exhibit. Physician-members of the Mississippi State Medical Association are eligible for the Scientific Achievement Award for excellence in scientific work. Guest exhibitors, foundations, and organizations do not participate for the award but may receive recognition for outstanding presentations. The Scientific Exhibit is located in Hurricane Room D, The Buena Vista Hotel.

EXHIBITORS

"Gastro-intestinal Effect of Vagotomy"
Frank H. Tucker, Jr., M.D., and W. O. Barnett, M.D., Jackson

"Clinical Uses of Angiography"
Carlos M. Chavez, M.D., Jackson

"Surgical Treatment of Arterial Disease"
Oscar Creech, Jr., M.D.; Charles Pearce, M.D.; Keith Reemtsma, M.D., and Robert Schramel, M.D., New Orleans, Louisiana

"The Differential Diagnosis of Syphilis"
Mississippi State Board of Health, Jackson

"Lesions of the Common Bile Duct"
James D. Hardy, M.D., and J. T. Davis, Jr., M.D., Jackson

"Mississippi Heart Association"

THE TECHNICAL EXHIBIT

The Mississippi State Medical Association presents with pride the 1965 Technical Exhibit. Established firms engaged in the manufacture and distribution of pharmaceuticals, supplies, equipment, and in providing varied services will present exhibits. Visit each exhibit often and discuss products and services with the Professional Service Representatives. Only registered members and guests are admitted. The Technical Exhibit is located in Hurricane Room A-C, The Buena Vista Hotel.

EXHIBITORS	BOOTH
Abbott Laboratories, North Chicago, Ill.	21
Bedsole Surgical Supply Co., Mobile, Ala	50
Bentex Pharmaceutical Co., Houston, Texas	18
The Borden Co., Pharmaceutical Div., New York, N. Y.	3
Ciba Pharmaceutical Products, Inc., Summit, N. J.	12
The Coca-Cola Company, Atlanta, Ga.	46
F. E. Compton and Company, Chicago, Ill.	23
Encyclopaedia Britannica, Inc., Chicago, Ill.	13
Estate Consulting Service, Jackson, Miss.	28
Geigy Pharmaceuticals, Yonkers, N. Y.	36
E. J. Hart and Co., Ltd., New Orleans, La.	43
Hewlett-Packard Co., Sanborn Medical Div., Atlanta, Ga.	32
Jones Brothers Drug Store, Gulfport, Miss.	42
Kay Surgical, Inc., Jackson, Miss.	1
Lanier Company, Jackson, Miss.	31
Lederle Laboratories, Pearl River, N. Y.	34
J. A. Majors Company, Dallas, Texas	7
McNees Medical Supply Company, Jackson, Miss.	33
Mead Johnson Laboratories, Evansville, Ind.	19
Merck Sharpe and Dohme, Philadelphia, Pa.	16
Merrill Lynch, Pierce, Fenner and Smith, Jackson, Miss.	37
Mississippi Hospital and Medical Service, Jackson, Miss.	47

Mutual Benefit Life Insurance Co., Newark, N. J. 49
Ortho Pharmaceutical Corporation, Raritan, N. J. 35
Parke, Davis and Company, Detroit, Mich. 11
Pepsi-Cola Bottlers Assn. of Mississippi 22
Pfizer Laboratories, New York, N. Y. 20
William P. Poythress and Co., Inc., Richmond, Va. 4
Richards Manufacturing Co., Memphis, Tenn. 25
A. H. Robins and Company, Richmond, Va. 10
Roche Laboratories, Nutley, N. J. 30
St. Paul Fire and Marine Insurance Co., St. Paul, Minn. 24
Sandoz Pharmaceuticals, Hanover, N. J. 27
Schering Corporation, Union, N. J. 41
G. D. Searle and Company, Chicago, Ill. 5
Smith, Miller and Patch, Inc., New York, N. Y. 14
Southern Surgical Supply Co., Inc., New Orleans, La. 15
E. R. Squibb and Sons, New York, N. Y. 26
Stuart Company, Pasadena, Calif. 48
Upjohn Company, Kalamazoo, Mich. 8
U. S. Vitamin and Pharmaceutical Corp., New York, N. Y. 44
W-T-S Pharmaceuticals, Rochester, N. Y. 2

SCIENTIFIC GRANTS

Eli Lilly and Company, Indianapolis, Ind.

S. E. Massengill Company, Bristol, Tenn.

Merck Sharp and Dohme, West Point, Pa.

REGISTRATION FOR EXHIBIT PRIZES

Visit the Technical Exhibits often and qualify for the drawing of attractive prizes. Obtain necessary initials as you visit each booth. Deposit cards at Registration not later than 5:00 p.m., Wednesday, May 12.

SCIENTIFIC PROGRAM



DR. FYKE

Tuesday, May 11, 1965
Hurricane Room E
Beginning at 9:00 a.m.

F. Earl Fyke, Jackson
Chairman
A. B. Smith, Meridian
Secretary

GENETIC PRINCIPLES IN MEDICAL PRACTICE
John Jackson, Jackson

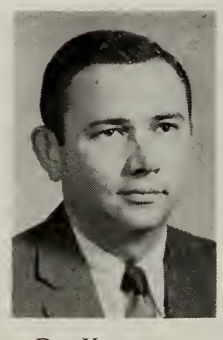
LABORATORY DIAGNOSIS OF THYROID DISORDERS
William B. Wilson, Jackson

NEWER CONCEPTS IN THE TREATMENT OF CARDIAC ARRHYTHMIAS
Charles B. Moore, New Orleans, Louisiana

DIAGNOSTIC STUDIES IN PATIENTS WITH DIASTOLIC HYPERTENSION
Hugh M. Batson, Jr., New Orleans, Louisiana

VIEW EXHIBITS

SCIENTIFIC PROGRAM



DR. KITCHINGS

Tuesday, May 11, 1965
Hurricane Room E
Beginning at 1:30 p.m.

John T. Kitchings, Jackson
Chairman
Daniel R. Thornton, Meridian
Secretary

CARDIAC PHYSIOLOGY DURING PREGNANCY
Denton A. Cooley, Houston, Texas

DIAGNOSTIC AND SURGICAL THERAPEUTIC APPROACHES TO CORONARY ARTERY DISEASE
Don W. Chapman, Houston, Texas

VIEW EXHIBITS

SCIENTIFIC PROGRAM



Dr. Field

Tuesday, May 11, 1965
Hurricane Room E
Beginning at 3:00 p.m.

Richard J. Field, Centreville
Chairman
Jack A. Atkinson, Brookhaven
Secretary

SEMINAR ON THYROTOXICOSIS

I

Diagnosis
Douglas L. Gordon, Baton Rouge, Louisiana

II

In Pregnancy
Edward T. Krementz, New Orleans, Louisiana

III

In the Young and Old
Paul J. Murison, New Orleans, Louisiana

IV

Medical and Surgical Therapy
B. Marden Black, Rochester, Minnesota

SYMPOSIUM ON PARAPSYCHOLOGY

Wednesday, May 12, 1965
Gold Room
Beginning at 9:30 a.m.

James L. Royals, Jackson
Chairman, Council on Scientific
Assembly, Presiding

The Field of Parapsychology
J. B. Rhine

Typical Cases of Spontaneous Parapsychical Experiences
Louisa E. Rhine

Main Findings and Current Developments
J. B. Rhine

Recess

Questions and Discussion

Film, Test Demonstration and Discussion

View Exhibits

SCIENTIFIC PROGRAM



DR. PHARR

Wednesday, May 12, 1965
Hurricane Room E
Beginning at 2:00 p.m.

Max L. Pharr, Jackson
Chairman
Maxwell D. Berman, Jackson
Secretary

LOW BACK AND LOWER EXTREMITY PAIN
Fred P. Sage, Memphis, Tennessee

NEUROLOGICAL AND SURGICAL PROCEDURES FOR RELIEF OF PAIN
Lucien R. Hodges, Jackson

INTENSIVE CARE OF THE ACUTE MYOCARDIAL INFARCT
William H. Rosenblatt, Jackson

SUBDURAL HEMATOMA
Nicholas Gotten, Memphis, Tennessee
D. J. Canale, Memphis, Tennessee

VIEW EXHIBITS

SCIENTIFIC PROGRAM



DR. NOBLIN

Wednesday, May 12, 1965
Hurricane Room E
Beginning at 3:30 p.m.

William E. Noblin, Jr., Jackson
Chairman

HEART DISEASE CONTROL
Alton B. Cobb, Jackson
Frank Andrews, Jackson

TUBERCULOSIS CONTROL
J. T. Hamrick, Jackson
Lee R. Reid, Jackson

POPULATION CONTROL
Kenneth Pittman, Jackson
Walter H. Rose, Indianola

SCIENTIFIC PROGRAM



DR. MANGOLD

Thursday, May 13, 1965
Hurricane Room E
Beginning at 9:30 a.m.

Maria J. Mangold, Yazoo City
Chairman
Samuel L. Brister, Greenwood
Secretary

USE OF DRUGS IN THE NEO-NATAL PERIOD
Nell Joyce Ryan, Jackson

IMMUNITY AND IMMUNIZATION IN INFANCY
Blair Batson, Jackson

THE ACUTE ABDOMEN IN INFANCY AND CHILDHOOD
Hugh B. Lynn, Rochester, Minnesota

PEDIATRIC ALLERGY
W. Q. Cole, Jackson

VIEW EXHIBITS

SCIENTIFIC PROGRAM



DR. SNEED

Thursday, May 13, 1965
Sun Room
Beginning at 9:30 a.m.

Ralph Sneed, Jackson
Chairman
E. M. Herring, Jr., Hattiesburg
Secretary

BEKESY AUDIOMETRY IN OTOLOGIC DIAGNOSIS
Ralph Sneed, Jackson

BOWEN'S DISEASE OF THE CORNEA — CASE REPORTS
Thomas W. Wesson, Tupelo

SOME REMARKS ON FACIAL PARALYSIS
David D. DeWeese, Portland, Oregon

VIEW EXHIBITS

ESSAYISTS



Dr. Batson

Hugh M. Batson, Jr., M.D., New Orleans, Louisiana. Staff member, Ochsner Clinic and Assistant Professor, Department of Medicine, The Tulane University. Medical Education: University of Virginia, 1947. Diplomate, American Board of Internal Medicine.



Dr. Black

B. Marden Black, M.D., Rochester, Minnesota. Professor, Department of Surgery, Mayo Graduate School of Medicine, University of Minnesota. Medical Education: Stanford University, 1936. Diplomate, American Board of Surgery.



Dr. Canale

D. J. Canale, M.D., Memphis, Tennessee. Consultant in Neurosurgery, Kennedy Veterans Hospital. Medical Education: University of Tennessee, 1955. Diplomate, American Board of Neurological Surgery.



Dr. Chapman

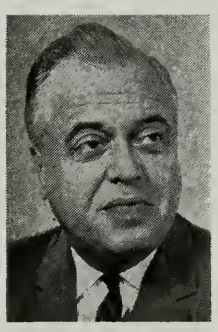
Don W. Chapman, M.D., Houston, Texas. Clinical Professor, Department of Medicine, Baylor University College of Medicine. Medical Education: University of Iowa, 1939. Diplomate, American Board of Internal Medicine.



Dr. Cooley

Denton A. Cooley, M.D., Houston, Texas. Professor, Department of Surgery, Baylor University College of Medicine. Medical Education: Johns Hopkins University, 1944. Diplomate, American Board of Surgery and American Board of Thoracic Surgery.

DAVID D. DEWEESE, M.D., Portland, Oregon. Professor, Department of Otolaryngology, University of Oregon. Medical Education: University of Michigan, 1938. Diplomate, American Board of Otolaryngology.



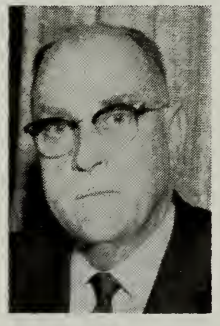
DR. DEWEESE



DR. GORDON

DOUGLAS L. GORDON, M.D., Baton Rouge, Louisiana. Staff Member, Baton Rouge Clinic and Clinical Associate Professor, Department of Medicine, LSU School of Medicine. Medical Education: The Tulane University, 1946. Diplomate, American Board of Internal Medicine.

NICHOLAS GOTTEN, M.D., Memphis, Tennessee. Chief of Neurosurgery, Methodist Hospital, and Professor of Neurosurgery, University of Tennessee. Medical Education: University of Tennessee, 1926. Diplomate, American Board of Neurological Surgery.



DR. GOTTEN



DR. KREMENTZ

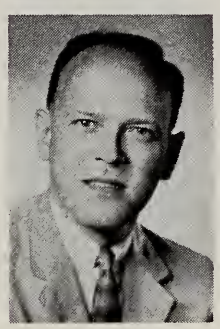
EDWARD T. KREMENTZ, M.D., New Orleans, Louisiana. Professor, Department of Surgery, The Tulane University. Medical Education: University of Rochester, 1943. Diplomate, American Board of Surgery.

HUGH B. LYNN, M.D., Rochester, Minnesota. Assistant Professor, Department of Surgery and Chief, Section of Pediatric Surgery, The Mayo Clinic. Medical Education: Columbia University, 1940. Diplomate, American Board of Surgery.



DR. LYNN

ESSAYISTS



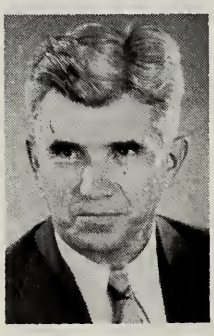
Dr. Moore

Charles B. Moore, M.D., New Orleans, Louisiana. Staff Member, Ochsner Clinic, and Assistant Professor, Department of Medicine, The Tulane University. Medical Education: University of Tennessee, 1952. Diplomate, American Board of Internal Medicine.

Paul J. Murison, M.D., New Orleans, Louisiana. Staff Member, Ochsner Clinic, and Associate Professor, Department of Medicine, The Tulane University. Medical Education: University of Illinois, 1943. Diplomate, American Board of Internal Medicine.



Dr. Murison



Dr. Rhine

J. B. Rhine, Ph.D., Durham, North Carolina. Professor, Duke University. Professional Education: University of Chicago.

Louisa E. Rhine, Ph.D., Durham, North Carolina. Professor, Duke University. Professional Education: University of Chicago.

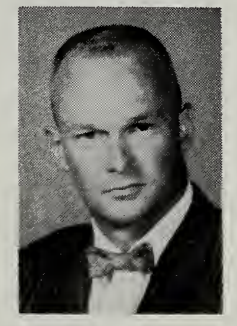


Dr. Rhine



Dr. Sage

Fred P. Sage, M.D., Memphis, Tennessee. Staff Member, Campbell Clinic and Instructor, Department of Orthopaedic Surgery, University of Tennessee. Medical Education: University of Tennessee, 1949. Diplomate, American Board of Orthopaedic Surgery.



Dr. Schreiber

Jack Schreiber, M.D., Canfield, Ohio. Speaker's Bureau, American Medical Association. Medical Education: University of 1930.



Dr. Ward

Donovan F. Ward, M.D., Dubuque, Iowa. President, American Medical Association. Medical Education: University of Iowa. Cincinnati, 1930.

MISSISSIPPI COMMISSION ON HOSPITAL CARE

Members of the Mississippi Commission on Hospital Care will meet on Monday, May 10, in the Fiesta Room, Buena Vista, at 9:30 a.m. Additional information will be supplied by Mr. Foster L. Fowler of Jackson, executive director of the commission.

FIFTY YEAR CLUB

Members of the Fifty Year Club will be honored at a luncheon on Tuesday, May 11, in the Fiesta Room, Buena Vista, at 12 o'clock noon. Dr. John B. Howell, Jr., of Canton, chairman of the Board of Trustees, will preside.

WOMAN'S AUXILIARY TO THE MISSISSIPPI STATE MEDICAL ASSOCIATION

42nd Annual Session
Buena Vista Hotel
May 10-12, 1965



MRS. SAFLEY

OFFICERS

MRS. T. J. SAFLEY
Jackson
President

MRS. J. HURD GADDY
Long Beach
President-Elect



MRS. GADDY

ANNUAL SESSION CHAIRMEN

MRS. W. S. SEKUL
Biloxi
General Chairman

MRS. FRANK O. SCHMIDT
Ocean Springs
Registration

MRS. KARL B. HORN
Moss Point
Luncheon

MRS. ROBERT F. CARTER
Ocean Springs
Decorations

MRS. J. A. GRAVES
Biloxi
Publicity

MRS. E. A. TRUDEAU
Biloxi
Transportation

Monday, May 10, 1965

2:00 p.m. Finance Committee Meeting, Mrs. A. T. Tatum
3:00-5:00 p.m. Registration, Mrs. Frank O. Schmidt, Chairman
Lobby, The Buena Vista
3:30 p.m. Preconvention Executive Board Meeting
Card Room, The Buena Vista

Tuesday, May 11, 1965

7:30-8:30 a.m. Continental Breakfast for Auxiliary Members
Mrs. T. J. Safley
Gold Room Center, The Buena Vista
8:00-3:00 p.m. Registration
Lobby, The Buena Vista

8:30 a.m. General Session, Mrs. T. J. Safley, Presiding
Gold Room Center, The Buena Vista
Invocation
Reverend Schuyler Batson, Biloxi
Auxiliary Pledge
Mrs. H. H. McClanahan, Jr., Columbus
Address of Welcome
Mrs. E. F. Chanton, Biloxi
Response
Mrs. Byron Mayo, Drew
Introductions
Mrs. Richard A. Sutter, President-elect
Woman's Auxiliary to AMA
Mrs. Jordan Kelling, President
Woman's Auxiliary to SMA
Presentation of Convention Chairman
Mrs. W. S. Sekul, Biloxi
Presentation of President-elect
Mrs. J. Hurd Gaddy, Long Beach
Greetings from Omar Simmons, M.D.
President, MSMA
Greetings from Everett H. Crawford, M.D.
President-elect, MSMA
Greetings from A. Street, M.D.
Auxiliary Advisory Chairman, MSMA
Report of AMA Auxiliary Convention
Mrs. Mal S. Riddell, Jr., Winona
Greetings from SMA Auxiliary
Mrs. Jordan Kelling, President
Waverly, Missouri
Report of SMA Auxiliary Convention
Mrs. J. P. Culpepper, Jr., Hattiesburg
Memorial Service
Mrs. A. J. McIlwain, Jackson
Minutes
Roll Call
Unit Presidents' Reports
Recommendations of the Board
Other Business
President's Report
Mrs. T. J. Safley, Jackson
Credentials and Registration
Mrs. Frank O. Schmidt, Biloxi
Report of the Nominating Committee
Mrs. Mal S. Riddell, Jr., Winona
Election of Officers
Appointment of Delegates to AMA Auxiliary
Courtesy Resolutions
Mrs. W. C. Warner, Jackson
Adjournment

12:30 p.m. Luncheon, The Fountain Terrace
Mrs. Karl B. Horn, Chairman
Mrs. T. J. Safley, Presiding
Honoring Jack Schreiber, M.D., Speaker's Bureau, AMA; Mrs. Richard A. Sutter, President-elect, Woman's Auxiliary to AMA; and Mrs. Jordan Kelling, President, Woman's Auxiliary to SMA
Grace
Mrs. C. L. Ezell, Ocean Springs
Introductions
Address
"The Fourth Candle"
Jack Schreiber, M.D., Canfield, Ohio
Greetings from AMA Auxiliary
Mrs. Richard A. Sutter, St. Louis, Missouri
Installation of Officers for 1965-66
Mrs. Sutter
Presentation of Gavel and Pin
Response of Incoming President
Mrs. J. Hurd Gaddy, Long Beach
Presentation of Past President's Pin
Mrs. Mayo Flynt, Meridian
AMA-ERF Awards
Mrs. Arthur E. Brown, Columbus
Announcements
Adjournment
4:00 p.m. Postconvention Executive Board Meeting and President's Workshop
Mrs. J. Hurd Gaddy, Presiding
Card Room, The Buena Vista

Wednesday, May 12, 1965

8:00 a.m. Past President's Breakfast
Mrs. Mal S. Riddell, Jr., Presiding
Sun Room, The Buena Vista
8:00-12:00 noon Registration
Lobby, The Buena Vista
9:30 a.m. Symposium on Parapsychology
Gold Room, The Buena Vista
3:30-4:00 p.m. Tea
Hostesses, The Coast Counties Medical Auxiliary, Home of Mrs. O. Z. Culler, 1814 Beach Drive, Mississippi City (Transportation at Registration Desk)
6:30 p.m. MSMA Fellowship Hour
Fountain Terrace, The Buena Vista
7:30 p.m. Hawaiian Luau
Gold Room, The Buena Vista

OTHER MEETINGS

MISSISSIPPI CHAPTER, AMERICAN COLLEGE OF SURGEONS

The Buena Vista
Monday, May 10, 1965

GEORGE F. ARCHER, Greenville, *President*
J. T. DAVIS, Corinth, *President-elect*
WILLIAM O. BARNETT, Jackson, *Secretary-Treasurer*

10:00 a.m. Scientific Program, Gold Room South
My Most Recent Difficult Case and How It Was Managed
William O. Barnett, Jackson, Presiding
Case Presentations
Discussion
T. Erskine Ross, Hattiesburg
M. Beckett Howorth, Jr., Oxford
Bedford F. Floyd, Gulfport
Thomas G. Barnes, Greenville
11:00 a.m. Business Meeting
12:00 noon Luncheon, Poolside Room
1:30 p.m. Diagnosis and Management of Carotid Body Tumors
Harwell Wilson, Memphis, Tennessee
2:15 p.m. Complications of Gynecologic Surgery
Michael Newton, Jackson
3:00 p.m. Some Current Problems in Surgery of the Large Bowel
B. Marden Black, Rochester, Minnesota

MISSISSIPPI ASSOCIATION OF PATHOLOGISTS

The Buena Vista
Monday, May 10, 1965

LOUIS SCHIESARI, Jackson, *President*
KENNETH M. HEARD, Jackson, *Secretary*

8:30 a.m. Scientific Program, Gold Room Center
Trends in Medical Technology
Merlin L. Trumball, Memphis, Tennessee
12:00 noon Luncheon Recess
2:00 p.m. Workshop on Electrophoresis
Scientific Products Division
American Hospital Supply Corporation
4:30 p.m. Business Meeting
6:00 p.m. Fellowship Hour, Gold Room South
7:00 p.m. Annual Banquet, Gold Room South

OTHER MEETINGS

COMMITTEE ON TRAUMA, AMERICAN COLLEGE OF SURGEONS

The Buena Vista
Tuesday, May 11, 1965

PAUL S. DERIAN, M.D., Jackson, *Co-Chairman*
ROBERT S. CALDWELL, M.D., Tupelo, *Co-Chairman*

9:00 a.m. Conference on Athletic Injuries, Sky Lounge
Introduction
Richard J. Field, Jr., Centreville
High School Injuries
Tom Marland, Jackson
A Trainer's Look at the Athlete
Mr. W. J. Luchsigner
How and When to Return the Athlete to Practice
William C. Warner, Jackson
9:45 a.m. Intermission
10:00 a.m. Football Injuries
Nick J. Accardo, New Orleans, Louisiana
Facial Injuries in Athletes
James H. Hendrix, Jr., Jackson
Facts and Fables
Albert L. Meena, Jackson
Case Presentations

TENNESSEE MEDICAL ALUMNI

University of Tennessee medical alumni will meet for a fellowship hour and banquet on Tuesday, May 11, the Buena Vista Hotel's Fountain Terrace Room, beginning at 7:00 p.m. Dr. A. T. Tatum of Petal is program chairman.

TULANE MEDICAL ALUMNI

Medical alumni of the Tulane University will sponsor a fellowship hour and banquet on Tuesday, May 11, in the Sun Room, the Buena Vista Hotel, at 7:00 p.m. Dr. Harry D. Schmidt of Biloxi is program chairman.

LOUISIANA-MISSISSIPPI OPHTHALMOLOGICAL AND OTOLARYNGOLOGICAL SOCIETY

The Edgewater Gulf
May 14-15, 1965

JOSEPH B. ROGERS, Oxford, *President*
HORACE B. DOZIER, New Orleans, *President-elect*
EDLEY H. JONES, Vicksburg, *Secretary*

Friday, May 14, 1965

7:30 a.m. Registration
8:00 a.m. Breakfast With Guest Speakers, Ballroom
9:00 a.m. Meeting Called to Order, Convention Hall
Welcome of Guests and Extension of Floor Privileges
President Joseph B. Rogers
Introduction of Newly Elected Fellows and Candidates
President-elect Horace B. Dozier
Announcements
Secretary Edley H. Jones
9:15 a.m. Dizziness and Vertigo
David B. DeWeese, Portland, Oregon
Coffee Break, Technical Exhibit Section
10:45 a.m. Treatment of Carcinoma of the Larynx and Metastasis
George F. Reed, Syracuse, New York
Immediately following adjournment of the morning session at about 12:00 noon, there will be a meeting of the Louisiana Eye, Ear, Nose and Throat Society.
2:00 p.m. President's Address
2:20 p.m. A Diagnostic Classification of Uveitis
A. E. Maumenee, Baltimore, Maryland
3:35 p.m. Glaucoma After Cataract Surgery
Harvey E. Thorpe, Pittsburgh, Pennsylvania
4:50 p.m. Council Meeting, Parlor D

Saturday, May 15, 1965

7:45 a.m. Registration
8:00 a.m. Breakfast Discussions With Guests, Parlors C-G
9:00 a.m. Executive Session for Fellows
10:15 a.m. Diagnosis of Retinal Detachment
Dr. Thorpe
Coffee Break, Technical Exhibit Section
10:45 a.m. A Differential Diagnosis of Macular Lesions
Dr. Maumenee
2:30 p.m. The Use of Dermal Grafts in Otolaryngology
Dr. Reed
3:45 p.m. Atypical Facial Pain and Some Special Problems of the of the Paranasal Sinuses

ENTERTAINMENT FEATURES

Friday, May 14, 1965

9:00-10:00 a.m. Ladies Coffee Hour, Hawaiian Terrace
6:30-7:30 p.m. Fellowship Hour, Ballroom
6:30-7:30 p.m. Children's Punch Party, Parlors D-E

Saturday, May 15, 1965

7:30 p.m. Fellowship Hour, Convention Hall
8:00 p.m. Dinner and Dance
Corsages, Compliments of the Edgewater Gulf
Music by Celestine Original Tuxedo Orchestra

GOLF AND TENNIS TOURNAMENTS

Golf and tennis tournaments will be held during the meeting. Those desiring to participate are requested to notify Dr. Arthur V. Hays, P. O. Box 1018, Gulfport, Mississippi, prior to the meeting. Participants in the tournaments must sign at the registration desk not later than 12:00 noon Friday, May 14.

REGISTRATION FEES

For Fellows of the Society and residents in ophthalmology and otolaryngology, there are no fees, but residents must have certificates from their superintendent or chief. For ophthalmologists and otolaryngologists in service, $5.00, and for all others, $15. This fee covers all charges except for breakfasts, $1.50, and for guest at the dinner and dance for which an additional charge of $7.50 will be made.

MISSISSIPPI SOCIETY OF ANESTHESIOLOGISTS

Members of the Mississippi Society of Anesthesiologists will meet at Jackson on Sunday, May 9, at the Jackson Country Club at 6:30 p.m. Dr. James E. Eckenhoff of Philadelphia, Pa., will speak. Officers are Drs. Marion P. Parker, president; Ralph E. Dunn, vice president; and Clarence H. Webb, Jr., secretary, all of Jackson.

MISSISSIPPI ORTHOPAEDIC SOCIETY

There will be a luncheon meeting of the Mississippi Orthopaedic Society, limited to members, on Monday, May 10, at the Broadwater Beach Hotel beginning at 12 o'clock noon. Officers are Drs. Edward A. Attix of Hattiesburg, president, and Daniel J. Enger of Pascagoula, secretary.

MISSISSIPPI OB-GYN SOCIETY

There will be a luncheon meeting of the Mississippi Ob-Gyn Society on Tuesday, May 11, in Gold Room South, Buena Vista, at 12 o'clock noon. Officers are Drs. Daniel R. Thornton, Jr., of Meridian, president; Chester H. Lake of Jackson, president-elect; and O. B. Wooley of Jackson, secretary.

INTERNATIONAL COLLEGE OF SURGEONS

Fellows of the Mississippi Chapter, International College of Surgeons will conduct a luncheon meeting beginning at 11:45 a.m. on Tuesday, May 11, in the Poolside Room, Buena Vista Motel. Officers are Drs. H. Grady Cook of Hattiesburg, president; R. Mayo Flynt of Meridian, president-elect; and Willis Walker of Hattiesburg, secretary.

MISSISSIPPI SOCIETY OF INTERNAL MEDICINE

Members of the Mississippi Society of Internal Medicine will meet for a luncheon on Tuesday, May 11, at 12:15 p.m. in the Sun Room, Buena Vista. Officers are Drs. S. H. McDonnieal, Jr., of Jackson, president; E. M. Murphey, III, of Tupelo, president-elect; and C. E. Wallace of Jackson, secretary.

MISSISSIPPI DIABETES ASSOCIATION

All interested physicians are invited to a special meeting of the Mississippi Diabetes Association on Tuesday, May 11, in the Fiesta Room, Buena Vista, at 3:00 p.m. Officers are Drs. Karleen C. Neill, president, and W. Johnson Witt, secretary, both of Jackson.

PAST PRESIDENTS

Past presidents of the Mississippi State Medical Association and Woman's Auxiliary, respectively, will enjoy breakfast meetings on Wednesday morning, May 12, at the Buena Vista. MSMA past presidents will meet at 7:30 a.m. in the Motel's Poolside Room, and Auxiliary past presidents, at 8:00 a.m. in the Hotel's Sun Room.

OTHER MEETINGS

FLYING PHYSICIANS ASSOCIATION

Mississippi members of the Flying Physicians Association and nonmember physicians interested in private aviation will meet for luncheon on Wednesday, May 12, in the Sun Room, Buena Vista, at 12 o'clock noon. Colonel Earl W. Brannon, Commander of Keesler AFB Hospital, will be the speaker. Officers are Drs. William M. Wood of Mississippi City, chairman, and Samuel B. Johnson of Jackson, secretary.

MISSISSIPPI PSYCHIATRIC SOCIETY

Meeting concurrently with the state medical association for the first time, the Mississippi Psychiatric Society will convene in the Fiesta Room, Buena Vista, on Wednesday, May 12, at 1:00 p.m. for a business session. Scientific work, to which all interested physicians are invited, begins at 2:00 p.m. Officers are Drs. John J. Head of Whitfield, president; Willard L. Waldron of Jackson, president-elect; and W. L. Jaquith of Whitfield, secretary.

SOUTHERN MEDICAL ASSOCIATION

An invitational breakfast meeting of Southern Medical Association officials and guests will be held on Thursday morning, May 13, in the Motel's Poolside Room, at 8:00 a.m. Dr. Howard A. Nelson of Greenwood, SMA councilor, is host.

MAGP LUNCHEON

The Mississippi Academy of General Practice will sponsor a luncheon on Thursday, May 13, in the Gold Room South, Buena Vista, at 12 o'clock noon. Officers are Drs. Frank C. Massengill of Brookhaven, president; Max L. Pharr of Jackson, president-elect; Albert L. Gore of Jackson, secretary; and Miss Louise Lacey of Jackson, executive secretary.

SECTION ON EENT LUNCHEON

The Section on Eye, Ear, Nose, and Throat will sponsor its annual luncheon on Thursday, May 13, at 12:30 p.m. in the Motel's Poolside Room. A business meeting of the Mississippi EENT Association will follow the luncheon.

JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION

Volume VI, Number 4
April 1965

EDITORIALS

William Thornton, M.D.: Architect Of the Republic's Temple

We have built no national temples but the Capitol.
We consult no common oracle but the Constitution.
—Rufus Choate, former Member of Congress

I

GRANDEUR, SIMPLICITY, and convenience appear to be so well combined in this plan that I have no doubt of its meeting with approbation from you." So wrote the first President of the United States, recommending a plan for the capitol building to the commissioners of the boggy, barren District of Columbia in 1792. And indeed, the plan did meet with hearty approbation, moving a gifted architect of the day, then Secretary of State Thomas Jefferson, to observe that the plan had "captivated the eyes and judgment of all." Few enough Americans have taken time to learn about this rich, absorbing chapter of our history; fewer still know that the Capitol of the United States was designed by a doctor of medicine.

Nearly 70 years in the building to reach its present day form, the capitol is a place where the shape of the republic has been forged. It is, by all odds, our most familiar national symbol, the trademark of our capital city, and the unvarying pattern from which most of our statehouses have been built. We are indebted to the United States Capitol Historical Society for its moving narrative, *We, the People,* in which a wealth of historical detail on republic's temple has been preserved.

II

At the age of 33 when he conceived the capitol plan, Dr. William Thornton had been a citizen of this country for only five years. By the time he was 28, he had earned his medical degree at Edinburgh, made a reputation for himself as a painter and inventor in Paris, and settled himself in the brave new nation where men dared to govern themselves by constitutional process.

Born on an island off Tortola in the West Indies in 1759, Thornton was destined to devote almost half of his life to the service of his adopted land. Possessed of an inquiring mind, he became known for minor engineering achievements in steam power in addition to his attainments in medicine and art. But it was in 1792 that this Scottish-trained physician marched into the annals of American history by entering a contest.

In that year, President Washington and the French soldier-engineer-city planner, Pierre Charles L'Enfant, made an on-site survey of the swampy district along the Potomac. They pre-

pared a map suggesting the wheel spoke plan for the capital city with the home of Congress situated on Jenkins Hill to be linked with the "presidential palace" by a broad green mall, known today as Pennsylvania Avenue. The new government, lacking sufficient funds with which to construct its permanent seat, hoped to finance public buildings by the sale of lots in the district, a plan which incidentally, failed to produce the needed revenue.

III

Recognizing that there were few trained architects in the young nation, the district commissioners announced a public competition to secure a suitable design for the capitol. The incentive was substantial for the day: $500 and a city lot for the winner. But all the entries, including that of professional architect Etienne Sulpice Hallett, were rejected. Three months after the close of the contest, Dr. Thornton requested and received permission to submit a belated entry. The rest is history, and his classic three story plan set the pattern for the temple of government.

With borrowed money on loans guaranteed by an act of Congress, the project was undertaken. On Sept. 18, 1793, George Washington himself, attired in the collar, sash, and apron of the Masonic order, laid the cornerstone with a silver trowel and marble gavel. Appropriately enough, the same trowel and gavel were used by President Eisenhower on July 4, 1959, when the east front extension was begun.

Dr. Thornton served as architect of the capitol until 1802, two years after the first unit was ready for occupancy by the 32 member Senate and the 106 member House of Representatives as well as the Library of Congress, the Supreme Court, and even the District of Columbia Circuit Court. There followed a succession of architects and construction superintendents in which at least one, Hallet, was dismissed for disagreeing with Thornton. In 1803, Benjamin H. Latrobe was appointed Surveyor of Public Buildings, and it was he who is credited with the uniquely beautiful interior design of the capitol.

IV

Dr. Thornton was appointed one of the three district commissioners in which capacity he was able to maintain his interest in the capitol project. Later, his engineering and mechanical inclinations stood him in sufficiently good stead to become head of the U. S. Patent Office, and he is credited with saving that building from the British torch during the War of 1812. From this point, Dr. Thornton faded into the limbo of history, and he died in 1828 with hardly a line surviving him as to his role as a physician.

Yet it was a physician, whose origin and education were astonishing parallel to those of Alexander Hamilton, who conceived and partially executed the most familiar of all public buildings in the western world, a modest man of healing whose work has overshadowed his identity and artistry.—R.B.K.

Polluted Water Is on the Way Out

It has missed enjoying the headlines reserved for sensational news stories, but Mississippi has quietly mounted a $70 million attack on water pollution in one of the most important public health programs undertaken since malaria was made as scarce as dragon's teeth. Under the leadership and aegis of the State Board of Health, communities have been stimulated to construct new and efficient waste disposal facilities, and the Board has reviewed and advised on similar projects involving development of more than 100 industrial sites, plants, motels, and school complexes.

Dr. A. L. Gray, executive officer of the Board, has said that water "is so important to health, wealth, and total progress that we cannot afford wasting or abusing it by pollution." His organization is making deeds from words, because gains have been enormous in the span of the past decade.

Apart from disposal projects in smaller communities, metropolitan areas have responded to the challenge: Biloxi has a new $1.5 million sewage treatment plant, and Jackson has built two, a 90 acre facility south of the city and a 75 acre project to the north.

By whatever name it is called, lagoon, oxidation pond, or stabilization basin, this classic treatment facility is best suited to meeting large scale pollution problems resulting from waste disposal. The first such facility was constructed in 1956 at Prentiss, and the program has grown in astonishing proportion. The State Board of Health works on dozens of these projects at any given time, offering engineering consultation and services of public health sanitarians. Not the least of this

effort has been in public health education through schools, organizations, and information programs.

Progress in the 20th century, especially the population explosion and unprecedented industrial and urban development, has brought the concomitant curse of pollution. But Mississippi, under medical leadership, is demonstrating that water pollution is on the way out.—R.B.K.

Discount House Labs: Pitfall for the Unwary

Mail order laboratory services may involve the physician-client in serious legal and ethical problems. This warning has been issued by the California Medical Association to its 25,000 members, suggesting that they be wary of sliding scale contracts offering lower fees on greater volume of tests. A recent study report on which the warning was predicated said that most trouble comes from the discount house-type laboratory whose long suit is high volume.

It should be clearly understood and appreciated that the warning is not intended for physician-owned laboratory facilities where pathology is practiced privately and ethically.

From the legal viewpoint, the warning noted, a physician is responsible for the care given his patient, and the courts have held that he can be liable if a faulty diagnosis results from an inaccurate test. It was even suggested that physicians who find it advantageous to use mail-away lab services split specimens from time to time for simultaneous testing by more than one laboratory, just to check up on accuracy. Medicolegal authorities were quoted as expressing concern over the vulnerability of a physician under cross examination when he cannot personally testify as to the competence of laboratory tests offered in evidence.

Ethical problems arise out of billing practices, CMA said. Instances were described where a physician is charged a low, volume fee for a test where, in turn, he charged the patient the usual private laboratory fee, realizing a substantial profit. The warning reminded association members that a physician should bill a patient only for services performed by him or his regularly employed medical assistants.

The pitfalls described give the report and warning a realistic ring and suggest strongly that physicians evaluate carefully the laboratory services which they utilize.—R.B.K.

DEATHS

COPELAND, WILLIAM DAVID, Sandersville. M.D., University of Tennessee School of Medicine, 1914; Emeritus Member of MSMA; died Feb. 26, 1965, aged 86.

HART, G. E., Inverness. M.D., Kentucky School of Medicine, Louisville, 1904; died Feb. 12, 1965, aged 94.

MAJURE, ALBERT LANE, Dixon. M.D., Emory University School of Medicine, Atlanta, Ga., 1916; died Feb. 12, 1965, aged 72.

WIEMERS, WESLEY JOHN CHARLES, Sanatorium. M.D., University of Texas Medical School, Galveston, 1916; interned John Seely Hospital, Galveston, Texas, one year; Emeritus Member of MSMA; member, Phi Chi Medical Fraternity, the American Thoracic Society, the American Trudeau Society, and a fellow of the American College of Chest Physicians; died Feb. 6, 1965, aged 74.

PERSONALS

NOLLIE FELTS, SR., of Hattiesburg was one of 21 former University of Southern Mississippi athletic stars recently inducted as the first members of USM's Sports Hall of Fame.

C. LAURENCE FRANKLIN has announced the opening of his office in Pascagoula for the practice of dermatology.

ELMO GABBERT has opened his office in Fayette for the general practice of medicine. Dr. Gabbert has been located in Bruce for the last three years.

FRED HOFFMAN has been named president of the Gulfport Rotary Club.

HOWARD A. NELSON was recently named Leflore County's Outstanding Citizen of 1964. Dr. Nelson is the immediate past president of the Greenwood Chamber of Commerce and is serving as a member of the Greenwood-Leflore Industrial Board and the City Planning Commission, among many other civic offices.



The President Speaking

'Counterfeit Drugs'

OMAR SIMMONS, M.D.
Newton, Mississippi

A COUNTERFEITER who makes a phony five dollar bill, when apprehended, can be prosecuted on felony charges and sent to prison for a long term. This is true even if he makes only one spurious bill and defrauds only one citizen of five dollars. But the counterfeiter who makes phony drugs, thereby endangering the lives of dozens or hundreds, may have committed only a misdemeanor and made himself civilly liable for patent infringement. And there are drug counterfeiters aplenty, preying on the unsuspecting with products which have all the appearances of being the genuine article.

During 1964, inspectors from the New York Board of Pharmacy found 131 different samples of counterfeit drugs. The fakes were quite convincing with monograms, labels, bottles, and seals nearly indistinguishable from the real thing. But after physical appearance and packaging, the similarity abruptly ends. Counterfeit pills are usually made in garages, basements, machine shops, and out-of-the-way warehouses where sanitation and quality control conditions are apt to be dangerously poor. Usually, such products are adulterated and notably over- or understrength. They can and do harm the unsuspecting patient.

Member firms of the ethical pharmaceutical manufacturing industry exercise great care to outwit the counterfeiters. They distribute only through reputable pharmaceutical channels, and they employ trained investigators to check up on the phonies. Drug makers cooperate with FDA and local law enforcement officials, too. Even though drug counterfeiting may be a relatively small threat, physicians have a stake in the danger it poses.

Let us counsel with drug company representatives, pharmacists, hospital administrators, and official agencies over this problem. When we have reason to suspect a drug product of being a fake, let's promptly inform the company concerned and furnish a sample. In brief, let's make drug counterfeiting as difficult and unprofitable as counterfeiting money. ★★★

Book Reviews

Polypoid Lesions of the Gastrointestinal Tract. By Claude E. Welch, M.D., Visiting Surgeon, Massachusetts General Hospital, Boston. Volume II in the Series, Major Problems in Clinical Surgery. J. Englebert Dunphy, M.D., Consulting Editor. 148 pages with illustrations. Philadelphia: W. B. Saunders Company, 1964. $7.50.

This excellent monograph on polypoid lesions of the gastrointestinal tract is recommended for those studying and treating diseases of the gastroenteric tract.

Each of the nine chapters of this richly illustrated monograph is both informative and entertaining.

Why has there been so much confusion in the definition of "polyp"? What causes a polypoid lesion? Do polyps occur in normal individuals? Is the papillary adenoma a distinct entity? What is the relationship of single adenomas, papillary adenomas and cancer? Why has there been a trend toward more conservative histological diagnosis?

These confusing and controversial points of views are treated, by the author, in a concise and logical manner.

Practical considerations are presented in the chapter on the treatment of polypoid lesions of the colon and rectum. Case histories are given to illustrate the problem of treatment of polypoid lesions. There are usual drawings and fresh photographs.

The last chapter pokes into the past, present, and future of polypoid lesions of the gastrointestinal tract. A superb list of references is found at the end of each chapter.

HERMAN E. KELLUM, JR., M.D.

The Retinal Vessels: Comparative Ophthalmoscopic and Histologic Studies on Healthy and Diseased Eyes. By R. Seitz, M.D., First Assistant of the University Eye Clinic, Tubingen. 186 pages. St. Louis: The C. V. Mosby Company, 1964. $14.50.

It has been known for years that for some fundus changes the pathologic anatomy is not sufficiently understood. As pointed out by Professor Harms in the preface to this volume, this is due to the fact that these changes may come to an enucleation only rarely, and if we have a chance to examine them histologically, a detailed ophthalmoscopic picture is frequently lacking.

The method used by Professor Seitz in securing retinal vessels has certainly not been in common use. The fundi of moribund patients were studied and diagrammed daily. Within one hour of death, the globes were removed, fixed in formalin for one hour, sectioned equatorially and examined under the binocular microscope. The previously observed areas were excised and sectioned serially. Our German colleagues, having rather unlimited autopsy privileges, have a considerable advantage in this method of study.

A rather lengthy section of the book deals with the arterio-venous crossings of the retinal vessels. Contrary to what we have believed for years, there is no real compression of the vein. The appearance is due to thickening of the perivascular connective tissue sheaths. One hundred such crossings were examined by Dr. Seitz.

There are interesting sections on occlusions of the retinal vessels and changes in diabetes. A tremendous amount of work was involved in correlating the clinical and histological findings in many varied conditions.

This book will be of great interest to all ophthalmologists and serious students of the ocular fundus. It will not be of particular value to the general practitioner. It is essentially a basic descriptive text of retinal vessel pathology. There are no particular clinical applications, i.e. therapy of prognosis. From basic texts such as this, the clinician will eventually derive much benefit.

THOMAS W. WESSON, M.D.

Books Received

Clinical Neurology. By Frank A. Elliott, M.D. 688 pages with illustrations. Philadelphia: W. B. Saunders Company, 1964. $12.50.

Simple Splinting: The Use of Light Splints and Related Conservative Therapy in Joint Diseases. By Jerome Rotstein, M.D. Foreword by Jerome S. Tobis, M.D., with a chapter on the History of the Treatment of Arthritis by Laura S. Rotstein, M.A. 126 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $6.50.

Medical Parasitology. ed. 2. By Edward K. Markell, Ph.D., M.D., and Marietta Voge, M.A., Ph.D. 317 pages with 115 figures. Philadelphia: W. B. Saunders Company, 1965. $8.50.



The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

Draper, Kenneth Dean, Hernando. Born Batesville, Miss., Nov. 27, 1935; M.D., University of Tennessee School of Medicine, Memphis, 1960; interned Duval Medical Center, Jacksonville, Fla., one year; captain, U. S. Air Force, four years; elected Dec. 1, 1964, by DeSoto County Medical Society.

Garbin, Frank George, Bay St. Louis. Born Biloxi, Miss., March 10, 1939; M.D., University of Tennessee School of Medicine, Memphis, 1955; interned St. Joseph Hospital, Memphis, Tenn., one year; general surgery residency, San Juan City Hospital, Santurce, Puerto Rico, four years; captain, U. S. Air Force, two years; elected Nov. 4, 1964, by Coast Counties Medical Society.

Lay, Adron Keith, Bay Springs. Born Sumner, Miss., Aug. 18, 1932; M.D., University of Mississippi School of Medicine, Jackson, 1963; interned Mobile General Hospital, Mobile, Ala., one year; master sgt., U. S. Army, two years; elected Feb. 22, 1965, by South Mississippi Medical Society.

Little, Robert Ashford, Gulfport. Born Oxford, Miss., May 5, 1930; M.D., Tulane University School of Medicine, New Orleans, La., 1960; interned Southern Pacific General Hospital, San Francisco, Calif., one year; ophthalmology residency, Tulane University, New Orleans, one year; EENT Hospital, Tulane University, two years; pfc, U. S. Army, two years; elected Nov. 4, 1964, by Coast Counties Medical Society.

Sheffield, James Alfred, Gulfport. Born Jackson, Miss., April 5, 1931; M.D., University of Tennessee School of Medicine, Memphis, 1955; interned John Gaston Hospital, Memphis, Tenn., one year; pediatric residency, Frank T. Tobey Memorial Children's Hospital, University of Tennessee, Memphis, one year; captain, U. S. Air Force, nine years; member American Board of Pediatrics; elected Nov. 4, 1964, by Coast Counties Medical Society.

Thompson, Robert Lewis, Ocean Springs. Born Hattiesburg, Miss., Sept. 30, 1929; M.D., University of Mississippi School of Medicine, Jackson, 1958; interned U. S. Naval Hospital, Great Lakes, Ill., one year; anesthesiology residency, U. S. Naval Hospital, St. Albans, N. Y., two years; LCDR MC, U. S. Navy, seven years; elected Nov. 4, 1964, by Coast Counties Medical Society.

Williams, Cecil Theodore, Jr., Tupelo. Born Laurel, Miss., March 23, 1934; M.D., University of Mississippi School of Medicine, Jackson, 1963; interned Mississippi Baptist Hospital, Jackson, one year; elected Dec. 8, 1964, by Northeast Mississippi Medical Society.

State Morbidity Reported Through March 5

The Mississippi State Board of Health reports the following occurrence of morbidity for 1965 through the 10th week of the year, ending March 5, 1965. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul.	285
Tuberculosis, O.F.	6
Dysentery	
Bacillary	11
Amoebic	1
Meningococcal Infections	2
Diphtheria	1
Mononucleosis, infectious	12
Hepatitis, infectious	51
Tetanus	2
Helminthic infections	
Hookworm	178
Ascariasis	58
Meningitis, O.F.	10
Histoplasmosis	2
Other Cestode Infestations	4
Salmonella Inf.	3
Gastro-enteritis	1
Streptococcus infections	
Scarlet fever	17
Strep throat	857
Pertussis	7
Measles	317
Chickenpox	120
Mumps	204
Influenza	3063
Gonorrhea	979
Syphilis	
Early	119
Late	23

Letters from Hawaii Invite State Doctors To Luau at MSMA 97th Annual Session

MSMA's 1400 members received a March invitation from Hawaii to a May Luau on the Mississippi Gulf Coast.

This was the Council on Scientific Assembly's special way of telling members about the major entertainment feature of the 97th Annual Session at Biloxi, May 10-13. Prepared in the MSMA headquarters office in Jackson, the letters were mailed by the Hawaii Medical Association in Honolulu.



View across the tropical setting of the Buena Vista Motel's pool-patio shows the new four story, 84 unit luxury addition which will be available for MSMA'S 97th Annual Session set for May 10-13 in Biloxi. The poolside area will be the site of several social functions during the four day meet.

Promising "no speeches, no head table, no starched shirts and dinner jackets, and no formalities," Council Chairman James L. Royals announced in the letter of invitation that the Hawaiian Luau is set for Wednesday evening, May 12. It will take the place of the annual association banquet, he said.

Advising members to "come in your loudest out-of-the-waistband sport shirt and tell your lady to wear her grass skirt or mumu," Dr. Royals said that guests will be "greeted with a flower lei and entertained in a manner calculated to conjure up visions of Polynesian paradise."

Entertainment, said Dr. Royals, will be in the theme of the occasion, and there will be dancing afterward to the music of Jerry Lane and his Orchestra.

Turning to more serious matters, Dr. Royals noted that the annual session will offer plenty of "collateral" benefits in an outstanding scientific program which has been streamlined into non-competing general sessions, specialty society meetings, medical alumni occasions, and the incomparable resort atmosphere of the Mississippi Gulf Coast. As he put it, "That's where fun-loving Hawaiians come for a vacation, too."

MSMA's 97th annual session will open Monday, May 10, with the House of Delegates meeting. Scientific highlight of the 1965 meeting will be a Symposium on Parapsychology scheduled for Wednesday, May 12. Internationally renowned investigator, Dr. J. B. Rhine of Duke University and his wife colleague, Dr. Louisa E. Rhine will conduct the symposium. The entire program for the annual session may be found on pages 129 through 156 of this issue.

MAGP Invites Scientific Exhibits

The Mississippi Academy of General Practice has invited applications for scientific exhibits for its 1965 annual meeting. This was the announcement of Dr. Charles H. Heywood of Canton, chairman of the Committee on Scientific Exhibits.

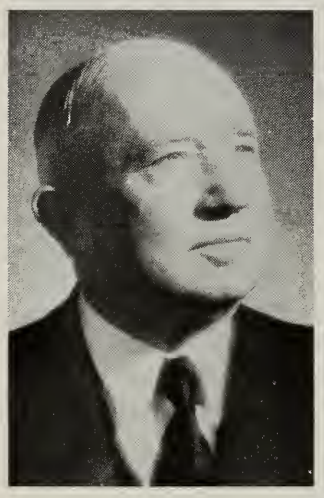
Dr. Heywood said that interested applicants should communicate with him, stating the subject of the exhibit, the name or names of authors, and the number of linear feet in wall space required for the exhibit. Floor plans of the exhibit hall will be provided to applicants.

The Academy meeting is scheduled for Oct. 12-14 at Jackson, Dr. Heywood added. Officers for 1965 are Drs. Frank C. Massengill of Brookhaven, president; Max L. Pharr of Jackson, president-elect; and Albert L. Gore of Jackson, secretary-treasurer.

Dr. Norwood Receives Fifty Year Club Insignia

Dr. Carl W. Norwood of Corinth was recognized March 7 for his 50 years of medical service.

In ceremonies at the First Methodist Church in Corinth, Dr. Norwood was presented the pin and plaque of the Fifty Year Club by Dr. W. H. Anderson of Booneville. A reception was held following the brief ceremony.



Dr. Norwood

Speakers for the occasion included Dr. Lamar Wadlington, president, Alcorn County Medical Club; Dr. J. T. Davis, member, MSMA Board of Trustees; Dr. Stanley A. Hill, alternate delegate to AMA; Dr. DeWitt Hamrick, associate editor, JMSMA, and member of the State Board of Health; Mr. June Montgomery, secretary and director of alumni affairs, University of Tennessee; Municipal Court Judge N. S. Sweat, Mr. Orma Smith, president-elect, Mississippi State Bar Association.

Dr. Norwood received his medical degree from the University of Tennessee in 1914. He later did postgraduate work at the University of Illinois. At the 1964 commencement of the University of Tennessee, he was presented the Golden "T" Certificate of Merit, in recognition of 50 years of dedicated service. Dr. Norwood has practiced in Corinth since 1919.

120 Bed Hospital Planned By 40 Jackson Doctors

The initial step toward construction of a two-million dollar para-medical hospital by a group of Jackson physicians was cleared with the City Council on March 2.

Dr. W. H. Boggan, Jr., representing about 40 Jackson doctors, requested re-zoning of four acres of property on University Avenue and Lakeland Drive to commercial status. The Council authorized public notice of the proposed change in zoning of the property located opposite St. Dominic's Hospital and hearing of any protests within about three weeks.

The building will be a one story structure with 120 rooms, according to T. N. Touchstone, architect, and will be owned and operated by the physicians joining in the project.

Dr. Boggan said the Doctors' Hospital, Jackson, Mississippi, Corporation, as the group is named, will move ahead with construction plans when the land is definitely cleared, hopefully by the end of March. Plans call for the hospital to be completed sometime in November.

The new 120-bed institution will bring Jackson's hospital bed capacity to 1807 with 409 at the Mississippi Baptist Hospital, 190 at St. Dominic-Jackson Memorial Hospital, 355 at the University Hospital, 228 at Hinds General Hospital, and 505 at the VA Hospital.

Mid-South Officers Discuss Plans



Dr. G. Swink Hicks, of Natchez, right, is now serving as president-elect of the Mid-South Postgraduate Medical Assembly. He discusses the organization's plans with Dr. Moore Moore, Jr., of Memphis, new president, center, and Dr. W. K. Tilley of Lebanon, vice president from Tennessee. Dr. Bryon Mayo of Drew is the vice president from Mississippi.

Greenwood C of C Hears Dr. Nelson, Miss America

Winding up a year termed the most successful in the organization's history, Dr. Howard A. Nelson, outgoing president of the Greenwood Chamber of Commerce, presided over the chamber's annual membership meeting.

Special guest for the occasion was Vonda Kay Van Dyke, Miss America of 1965.

In his message to Chamber of Commerce members, Dr. Nelson said, "We are told that a politician looks forward to the next election, while the statesman looks forward to the next generation. So it is also true of the practitioners of business, industry, the arts, sciences, and professions, for theirs is the challenge and task of building tomorrow's heritage today."

Continuing, Dr. Nelson said, "Our challenge in this hour is made all the more difficult, for we are caught up in a strange new social revolution. Values are changing, tradition is taking new shape, and our institutions are absorbing enormous impact. Throughout much of the nation, the honored and good name of our state has tragically become synonymous in the minds of many with undoing, unrest, unfairness, and even violence."

He predicted that Greenwood citizens "will rise to this challenge with dignity, honor and respect for themselves and others," and called for "a common forum of fairness."

Dr. Nelson was succeeded by J. Winton Young.

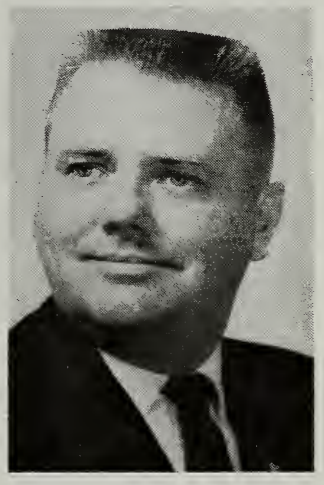


Dr. Howard A. Nelson, left, outgoing president of the Greenwood Chamber of Commerce, shared honors with Miss America of 1965, Vonda Kay Van Dyke, at the chamber's annual membership meeting. Shown with Dr. Nelson and Miss Van Dyke is E. H. Blackstone, chamber manager.

Dr. Davis Announces For Hinds Coroner

Dr. Thomas M. Davis of Jackson has formally announced as a candidate for Hinds County Coroner.

Dr. Davis is a native Jacksonian and has been a practicing physician in Jackson for 12 years. He is a graduate of Jackson's Central High School and received a Bachelor of Science degree from Tulane University, and his medical degree from Tulane School of Medicine.



Dr. Davis

In a prepared statement, he said, "I feel that as a practicing physician I have special qualifications for the office of coroner and it would please me to be able to serve the people of Hinds County in this capacity."

Dr. Davis has been highly active in Republican Party affairs in Hinds County and the state. He is a member of the Mississippi State Medical Association, the American Medical Association and the Mississippi Academy of General Practice. He is a former President of the Jackson Civitan Club and is a member of the Official Board of Galloway Memorial Methodist Church.

Ob-Gyn Board Sets Part II Exams

The American Board of Obstetrics and Gynecology has announced that the Part II (oral and clinical examination) for all scheduled candidates will be conducted April 26-May 1, 1965, by the entire Board at the Edgewater Beach Hotel in Chicago.

New and reopened applications and requests for re-examination in the Part II examination for 1966 will be accepted in the office of the Board secretary during April and May, 1965. Applications and requests postmarked later than May 31 will be returned to the sender.

Vice Presidents Meet For Jackson Conference



MSMA's three vice presidents met recently at the headquarters office in Jackson to confer on organizational and membership matters. From left to right they are Dr. Paul B. Brumby of Lexington; Dr. W. W. Walley of Waynesboro, and Dr. Rhea L. Wyatt of Holly Springs.

Orientation Program Set By Disability Section

In a recent policy statement, E. P. Rawson, coordinator of the Disability Determination Section, Division of Vocational Rehabilitation said the agency felt the attending physician should have more responsibility in the selection of disability recipients.

Said Mr. Rawson, "With the increase in the number of Mississippians covered under the Social Security program and with the increasing liberalization of benefits, the selection of disability recipients has become a big business within this state."

"In meeting the demands for evaluating the many claims for disability benefits," he continued, "there has been a marked increase in the utilization of specialists. It has become apparent that utilization of the applicant's own private physician to supply this medical information has been neglected. The agency feels that the applicant's private physician is, in most cases, better acquainted with the applicant and therefore capable of rendering valuable objective information needed in the determination of disability.

Mr. Rawson said that over the next 18 months selected attending physicians will be invited to orientation meetings to acquaint them with the needs of the agency.

Homochitto Society Names Dr. Davis President

Dr. John I. Davis has been elected president of the Homochitto Valley Medical Society for 1965.

Other officers elected were Dr. Gerald Foret, vice president; Dr. Walter Colbert, secretary-treasurer, and Dr. William Calhoun, board member.

Dr. Leo J. Scanlon, Jr., and Dr. Will T. Harper were elected delegates to the MSMA House of Delegates. Dr. Scanlon will represent Adams County and Dr. Harper will represent Jefferson County.

Insurance Institute Recognizes Thomas Yates



Thomas E. Yates, Jr., right, president of Thomas Yates and Company of Jackson, received the Award for Professional Excellence from Forrest T. Jones, president of the American Institute of Professional Association Group Insurance Administrators, at the Institute's midwinter conference in San Juan, Puerto Rico. Mr. Yates is administrator for MSMA's Continental group plans.

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION
JACKSON, MISSISSIPPI

May 1965

Dear Doctor:

Public hearings on the administration's Medicare bill could begin in the Senate Finance Committee at any moment between now and July 15. Biggest holdup is pending business of voting bill which may be debated for a month. Committee airing on Medicare will be the first opportunity for public expression, since House operated in closed sessions.

> Both friend and foe of measure will seek amendments, each of which must be considered under Senate rules. Sen. Douglas (D., Ill.) has already introduced amendment to put anesthesiologists, pathologists, radiologists, and physiatrists back into hospital provisions apart from other physicians.

Trials of a Pascagoula couple for alleged murder of their four year old son has refocused attention on need for a "battered child" law in state. MSMA sponsored such a bill in 1964 legislature which passed House but was killed by Senate Judiciary Committee. Authorities speculate that less dramatic cases go unpunished for lack of civil immunity in reporting suspected child abuse.

A national physicians conference will be sponsored by the Methodist Church at Lake Junaluska, N.C., July 8-11. Endorsed by AMA's Department of Medicine and Religion, the meeting will be interdenominational and generally along lines of AMA program of activity. Programs available on request from MSMA.

University Medical Center announced plans for a new south wing to house additional adult and 100 new pediatric beds, heart station, and labs. Adult unit will have single occupancy rooms with private patient entrance and elevators. The $3 million project will be financed with 2-for-1 federal funds and is tentatively programmed for completion by 1968.

Connecticut has adopted new public health regulations requiring fluoridation of all water supplies serving 20,000 or more persons. Two compliance deadlines have been set: January 1, 1967, for cities of 50,000 up and October 1, 1967, for communities of 20,000. Ruling faces court challenge which proponents say is of small consequence.

Sincerely,

Rowland B. Kennedy
Executive Secretary

DATELINE - MEDICAL AMERICA

DeBakey Commission Program Can 'Damage Medical Care'

Chicago - The massive federal program of 60 regional university complexes and 550 satellite diagnostic and treatment stations, recommended by the DeBakey commission to "conquer" heart disease, cancer, and stroke is opposed by AMA. The $2.9 billion crash undertaking is founded on two undocumented and controversial assumptions, AMA says, which are that American physicians are unable to keep up with medical progress and that spending more money will cure more diseases. Statement said that "money does not buy knowledge" and that program can only damage care patterns. MSMA announced opposition on April 8.

Astronauts Carried Drugs On Gemini Orbital Mission

Cape Kennedy - The recent two man space mission was equipped with six drugs for self-administration by the astronauts, but only on orders from a ground based flight surgeon. Included were anodynes, analgesics, antiemetics, antibiotics, antimalarials, and analeptics. Dosage forms carried permitted oral or AstroPen administration. Experiment also showed effects of space flight on drugs.

Chinese Reds Are Expanding Opium Markets

Washington - Intelligence sources reveal that Red China has built its government-sponsored opium industry from $70 million to more than $500 million annually. Poppy acreage is estimated to have been increased from 300,000 to 1.5 million acres with laboratories at Kinping and Tali turning out 1,000 tons of opium each year. Illicit sales furnish much needed foreign exchange to Red China for trade with west. Interestingly enough, next biggest producer is India.

Pfizer Tetracycline Patent Is Upheld

Miami - A federal district court has ruled that the patent on tetracycline owned by Chas. Pfizer and Co., Inc. is valid and fully enforceable. After years of stormy litigation, case was the first to reach trial on patent validity. Pfizer filed suit praying for permanent injunction against a distributor of generic tetracycline. The drug is the original discovery of Pfizer's Dr. Lloyd H. Conover.

NCANH Accreditation Breaks 500 Mark

Chicago - The National Council for the Accreditation of Nursing Homes announced that 554 nursing homes, consisting of nearly 37,000 beds, in 43 states have been accredited. Categories included accreditation of 191 intensive care facilities, 269 skilled care homes, and 94 intermediate care institutions. Program is co-sponsored by AMA.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
May 1965, Vol. VI, No. 5

ORIGINAL PAPERS

Erect Phototimed Spot Films of the Gallbladder

ROBERT P. HENDERSON, M.D.; ELMER J. HARRIS, M.D.,
and JAMES M. PACKER, M.D.
Jackson, Mississippi

Gallstones smaller than 10 mm. quite frequently are missed with conventional films. The authors report the use of phototimed erect compression spot films in locating stones in this size range. They discuss their procedure and present an evaluation of their results.

GALLSTONES LARGER than 1 cm. can usually be demonstrated with prone, PA, and oblique films of the gallbladder unless there is overlying gas from the colon or duodenum or fecal material from the colon. Stones smaller than 10 mm. quite frequently are missed with conventional films. An adequate oral cholecystogram examination is not complete without films in which the x-ray beam is horizontal and the patient is either standing or in the right lateral decubitus position to demonstrate the "layering effect" of gallstones. Neither is the examination complete unless an attempt is made by a repeat examination to obtain an optimal concentration of the cholecystographic agent within the gallbladder.[1] Rosenbaum[2] found in a review of 400 cases of cholecystograms that a repeat was necessary in 66 cases (14.7 per cent). Forty-six (69.7 per cent) had abnormal findings on both examinations, but 20 patients (30 per cent) who showed abnormal findings on the first examination had a normal gallbladder without stones on the second study.

Decubitus or erect films of the gallbladder taken with a conventional Bucky technique are usually satisfactory, although somewhat time consuming from a technical standpoint.[3] We have found that phototimed erect compression spot films afford a relatively simple method with excellent detail and consistent density. Our usual procedure is to take conventional PA and oblique films of the gallbladder. These are then studied before beginning the upper GI series which usually is ordered in conjunction with the gallbladder study. If gallstones are obvious or there is a nonfunctioning gallbladder, no spot films are taken. On all poorly functioning and non-functioning gallbladders a repeat examination is usually done. Our present schedule that is used for Telepaque seems to be the most satisfactory one. For patients less than 150 pounds, six tablets are used; from 150 to 200 pounds nine tablets are given; and for over 200 pounds the initial dose to 12 tablets. With repeat examinations the following day the dose may increase some but does not exceed 12 tablets. Rosenbaum,[2] for example, found that the gallbladder on occasions was much more dense the second day without any additional Telepaque. It has been our impression that it is the additional time and to a

lesser degree additional tablets that contributed to better concentration of Telepaque within the gallbladder on this second day.

TECHNIQUE

To obtain these spot films at the time of fluoroscopy, it is necessary to be fully adapted just as for an upper GI series. The gallbladder is located quite easily, and with graded compression the density of the gallbladder shadow can be varied. A dense gallbladder shadow may obscure small stones, but with compression this density can be decreased (Figure 1). Also, gas and fecal material can be rotated off of the gallbladder, and the gallbladder can be moved upward usually without any difficulty. With phototiming it is technically not a difficult problem, although even without phototiming it can be a satisfactory procedure. A reciprocating grid provides further improvement in detail, but nongrid films are actually preferable to a stationary grid. A 60 to 70 KV range is generally used.

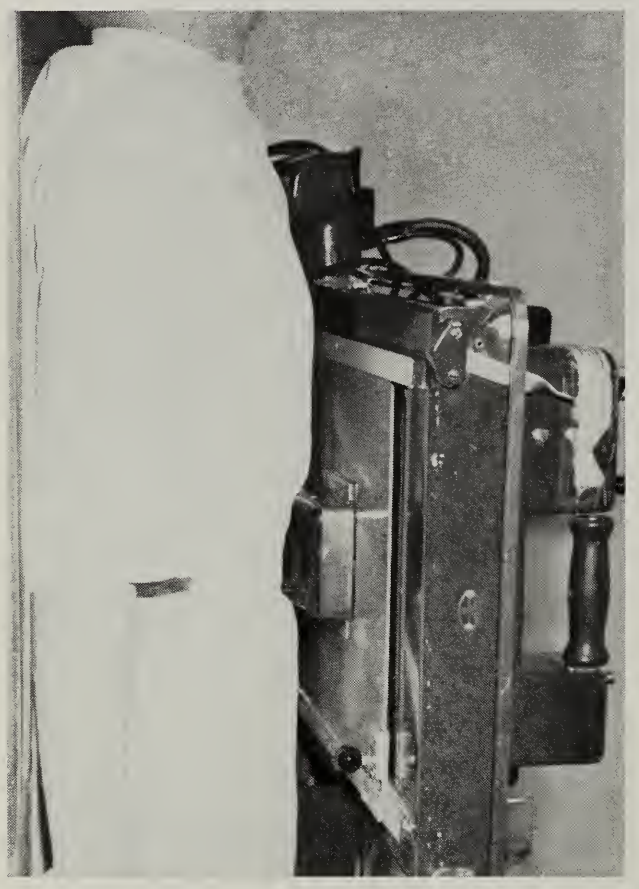


Figure 1. The gallbladder-film distance can be reduced with the pressure cone. The decrease in the object film distance, the relatively low KV range, the rotation and compression of the gallbladder are all important factors in the good definition of these spot films. The uniform density of the gallstones is utilized in the layering effect on these erect films, usually resulting in the stones settling to the most dependent part of the gallbladder, but occasionally with a layer of stones in the mid gallbladder region or rarely in the neck of the gallbladder.

To evaluate our results 100 consecutive cases of cholecystographic demonstration of gallstones were reviewed (Table I). In 59 per cent of these cases conventional films identified the stones without any difficulty. In another 30 per cent of the cases the stones were best seen on erect spot films. It is noted that in this category there are some even over 15 mm. that are best seen on erect spots. So often in this group is the solitary gallstone with overlying gas in the colon which is tending to obscure the gallstones. In the 16 cases of small stones best seen on erect spot films, it may have been necessary to take many additional films if erect spot films had not been taken.

TABLE I

DATA ON 100 CONSECUTIVE CASES OF CHOLECYSTOGRAPHIC DEMONSTRATION OF GALLSTONES

	Cases	*Per Cent of Cases*	
Stones well outlined on routine prone films			
Less than 10 mm. size	16	16	
10-15 mm. size	14	14	50
Over 15 mm. in size	20	20	
Stones seen *best* on erect spot films			
Less than 10 mm. size	16	16	
10-15 mm. size	5	5	30
Over 15 mm. in size	9	9	
Stones seen *only* on erect spot films			
Less than 10 mm. size	11	11	
10-15 mm. size	0	0	11
Over 15 mm. in size	0	0	
Calcified gallstones in a nonfunctioning gallbladder	9	9	9
TOTAL	100	100	

EVALUATION

Of extreme importance is the 11 per cent of the cases in which the stones were seen only on erect spot films. These were all less than 10 mm. in size. This is a conservatively established percentage. Hoffman[4] reported an incidence of 32 out of 103

patients with calculi seen only on compression spot films. Figure 2 is a conventional film taken in a rather small patient with the gallbladder not being unusually dense. These films do not reveal



Figure 2. The gallbladder density and the detail of the radiograph seem to be satisfactory, and no suspicious radiolucency can be seen on conventional films.

any stones, and yet a single spot film (Figure 3) taken prior to the upper GI series clearly reveals a 2 mm. cholesterol stone in the fundus of the gallbladder. Figure 4 shows a suggestion of a gall-

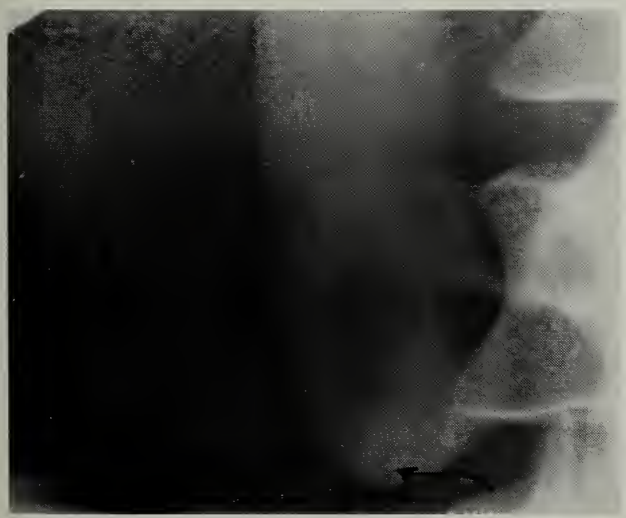


Figure 3. This 2 mm. gallstone in the most dependent part of the gallbladder on this erect film has a small calcific center which can be appreciated on this spot film, demonstrating the high definition that can be obtained with phototimed spot films using a reciprocatic grid.

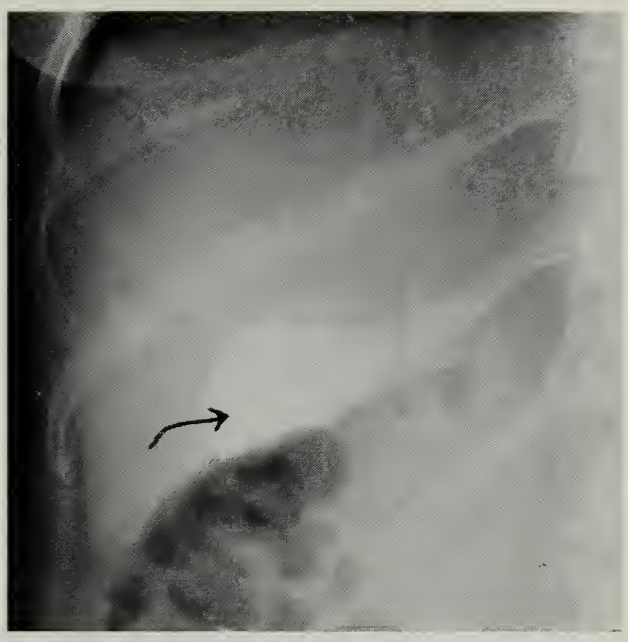


Figure 4. The conventional film showed a faint radiolucency within the gallbladder, and this was classified as a case in which stones were seen best on erect spot films.

stone on conventional films which was classified as a case seen best with erect spot films, as is clearly shown in Figure 5. The overall density of the spot films, as compared with the conventional films in this case, is essentially the same.[1] Yet these spot films clearly demonstrate the cluster of gallstones in this dependent portion.

Phototimed compression spot films have also been of great assurance to us in reporting the many negative gallbladder studies not included in

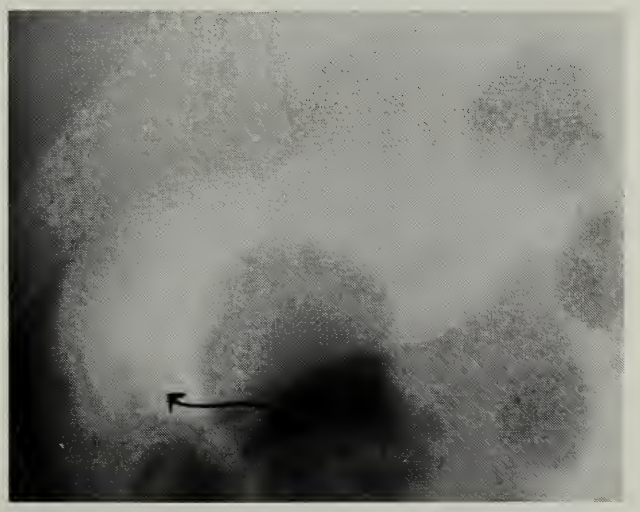


Figure 5. This spot film shows clearly the cluster of small stones in the dependent portion of the gallbladder, showing how the gas can be rotated off of the gallbladder.

this table. Also, with multiple views in the erect position, it is much easier to identify small polypoid lesions within the gallbladder which can be profiled to establish the fixed mucosal position.

In summary, phototimed compression spot films of the gallbladder give added assurance on both the negative gallbladder studies and the ones in which there is a suspicion of a gallstone or in which gallstones are poorly visualized. Most important, it has increased our yield of gallstones by 11 per cent, these gallstones being less than 10 mm. and some as small as 2 mm. We have found that this constitutes a much easier examination than the decubitus films or the erect films of the gallbladder done with conventional Bucky technique. ★★★

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ASK A SILLY QUESTION . . .

A Naval air squadron was operating from a carrier in the Pacific on a peacetime exercise under the strictest orders that radio silence was to be maintained on all flights. Suddenly the officers in the operations room heard the voice of one pilot on the radio snort: "Brother, am I fouled up."

The senior operations officer grabbed a microphone angrily and commanded: "Will the pilot who just broke radio silence identify himself immediately?"

A few seconds of deathly silence followed and then a voice came floating back: "I'm not that fouled up."

Polycystic Ovarian Syndrome

WILLIAM S. COOK, M.D.
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In 1935 Stein and Leventhal reported a series of seven cases in which amenorrhea was associated with the presence of bilateral polycystic ovaries. From this report of their work, polycystic ovarian syndrome became known as Stein-Leventhal Syndrome. The author discusses current opinion regarding this disorder from the standpoint of histopathology, signs and symptoms, pathologic physiology, and treatment.

POLYCYSTIC OVARIES were first described by Chereau in 1844 as sclerocystic changes of the ovary.[1] In 1895 Waldo proposed wedge resection of the ovaries.[2] Stein and Leventhal reported a series of seven cases in 1935 in which amenorrhea was associated with the presence of bilateral polycystic ovaries.[3] They felt that the polycystic ovaries were most likely the result of hormonal influences. They employed surgical treatment, consisting of wedge-resection of the cystic cortex and were successful in completely restoring physiologic function with normal menses in all seven cases. Five of the seven conceived. Thus, polycystic ovarian syndrome became known as Stein-Leventhal Syndrome.

HISTOPATHOLOGY

The polycystic ovary is enlarged one and one-half to two times normal size with a smooth and pearly white external appearance. Instead of the ovary being round to oval in shape, it is markedly elongated. Cross section reveals numerous pea-sized cysts beneath the thickened tunica.

Histologic examination reveals a thickened collagenous tunica and fibrotic cortex (Figure 1). There are dozens of small atretic follicles occupying the cortex. The follicles may be lined by a few layers of granulosa cells, and the theca externa is usually hyperplastic. The medulla and the hilus have a dense fibrous stroma. The ovaries become enlarged because of the accumulation of the follicles which do not progress to maturation and rupture. Sometimes the stroma in the medulla or in the hilus of the ovary is tremendously hypertrophied especially in the periphery, medial to the collagenous thickening. The cells are large and fusiform, as if there is tremendous activity in this otherwise dormant mesenchyma.[4]

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One investigator has related polycystic ovaries with endometrial carcinoma;[5] however, Stein and others have not found this to be true.[6]

SIGNS AND SYMPTOMS

The syndrome consists essentially of secondary amenorrhea, sterility, a male type hirsutism (50 per cent), uterine hypoplasia (75 per cent), bilateral enlarged and symmetrical ovaries. It is seen most commonly between the ages of 15 and 30. The skeletal structure is usually feminine.[7] Fre-

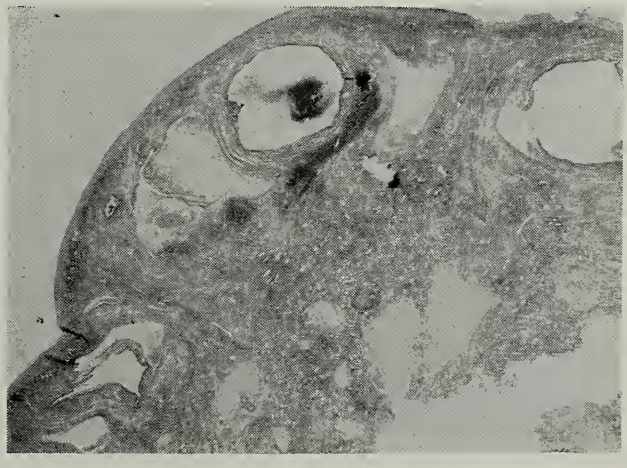


Figure 1

quently the woman is slightly on the obese side (66 per cent), and as a rule has good breast development. These patients may have considerable hair on the face, abdomen, and breasts but their voices are feminine. Some patients have excessive bleeding prior to development of oligomenorrhea or amenorrhea. Endometrial hyperplasia may occur due to temporary hyperestrinism. Thus the patient may present with hypermenorrhea rather than amenorrhea.[8] The overall incidence of infertility ranges from 35 per cent to 94 per cent.[9]

PATHOLOGIC PHYSIOLOGY

There are numerous theories as to the cause of polycystic ovaries. It was thought earlier that the syndrome was due to the fibrotic thickening of the capsule of the ovary. This has been disproven by ovulation following unilateral oophorectomy or treatment with Cortisone.[10] Now, the thick capsule is thought to be secondary to the lack of ovulation.

Others have felt that there is an abnormal pituitary-ovarian relationship.[11] Large doses of FSH have been given to normal patients resulting in polycystic ovaries; however, Stein-Leventhal patients have normal FSH values.[12]

Greenblatt probably has one of the most popular theories in which he feels that the patient is sensitive to normal amounts of her own gonadotrophins, which results in enlarged polycystic ovaries. These can be compared to Cushing's Disease in that normal amounts of ACTH are produced. These patients are sensitive to their own normal excretion of ACTH, and the adrenals become hyperplastic. With removal of much adrenal tissue the patient reverts to normalcy.[13]

Evidence is accumulating to show that the ovary is capable of producing small amounts of potent androgenic substances (Figure 2). Mahesh and Greenblatt have recently found that there is an enzymatic abnormality in which 17αhydroxyprogesterone and Δ^4 androstenedione are formed from progesterone. Both are potent androgens. In the metabolism of cholesterol another androgen called dehydroepiandrosterone is formed.[14] The normal ovary synthesizes 17αhydroxyprogesterone and Δ^4 androstenedione or dehydroepiandrosterone into estrogens; mainly, estradiol and estrone. The polycystic ovary shows only very poor conversion of these androgens into estrogen; therefore, it accumulates a large amount of these androgens.

TREATMENT

The treatment consists of Cortisone and/or surgical wedge resection of both ovaries.

The usual dose of Cortisone is 25-50 mg. or its equivalent daily over a six month period. The rationale in the use of Cortisone is that it may lessen the sensitivity of the hyperresponsive ovaries to gonadotrophins, permitting a more orderly design of function or to rule out mild hyperadrenalism by suppression of the 17 Ketosteroids. The 17 Ketosteroids are usually normal to slightly elevated.[8]

Bilateral wedge resection with removal of two-thirds of each ovary is usually successful; however, most feel that a six month course of Cortisone should be tried first. If there is no clinical response, surgical wedge resection should be performed.

In the near future we may expect to see a marked change in the treatment of polycystic ovaries due to the advent of Clomid. Clomid has been used by several investigators with success in the treatment of polycystic ovaries.

Successful treatment produces ovulatory menses, restoration of fertility, and stops progression of hirsutism, as hirsutism is not usually reversible.[15] ★★★

500-C E. Woodrow Wilson

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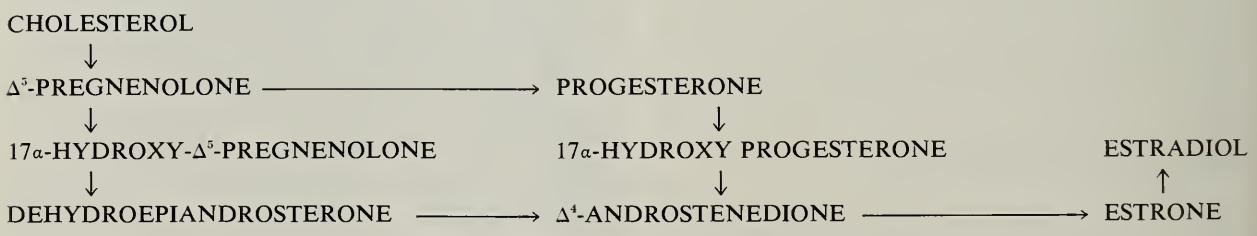


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ASHES TO AHE

A wealthy physician lay ill in the hospital. He summoned his best friend and made him promise to see that his mortal remains would be cremated if he passed on. The friend agreed, but with cautious reverence asked, "What do you want me to do with the ashes?"

"Do with the ashes?" said the physician. "Place them in an envelope and send them to the Collector of Internal Revenue and tell him: 'Now you have everything.' "

Evaluation of Pleural and Peritoneal Effusion Cytologies

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Jackson, Mississippi

Cytological examination of tissue scrapings and body fluids has come to play a prominent role in the early diagnosis of malignancy. It is therefore necessary, note the authors, to know just how reliable these cytological diagnoses are. They report a University of Mississippi Medical Center study in which all positive pleural and peritoneal cytologies between 1960 and 1963 were reviewed for correctness. They conclude that the UMC figures support the contention that these tests are reliable.

In recent years, cytological examination of tissue scrapings and body fluids has come to play a more prominent role in the earlier diagnosis of malignancy. There are, in fact, times when the only definite objective evidence of a malignancy lies in the cytological report. It behooves us therefore to know just how reliable these cytological diagnoses are. Pleural effusion cytology, in particular, has received criticism because of the difficulty in distinguishing malignant cells from atypical, but nonmalignant, cells. This report was written in order to evaluate the reliability of pleural effusion cytology in this hospital. Peritoneal effusion cytology was reviewed also as a comparison.

The cytologic reports at University Hospital are given as one of six classes (Class 0 through Class V), a modification of Papanicolaou's classification.[1] Class 0 includes those samples which are unsatisfactory for study. Class I is completely normal while Class II shows some atypical cells but no malignant ones. Samples suspicious for malignant cells are placed in Class III. Classes IV and V show definitely malignant cells, a few in Class IV and more in Class V. It is our contention that a Class IV or V cytology report on a pleural or peritoneal effusion sample by a competent, conservative pathologist is almost definite evidence for the existence of a malignancy in that patient.

MATERIALS AND METHODS

The pathology files were searched for all pleural and peritoneal effusion cytology reports for the years 1960-1963. All Class IV and V reports were examined. The charts on these patients were reviewed and the final diagnoses obtained, if possible. Malignant diagnoses were accepted only if based on histological examination of tissue obtained either by biopsy or at postmortem. All false-positive cytology diagnoses were reviewed by members of the pathology department.

It was decided that only patients with a tissue diagnosis of malignancy or with a year's follow-up without evidence of malignancy would be included in this study. A one year follow-up was felt to be adequate time for evidence of a malignancy to appear should it not be found on the initial examination. Patients who died or were lost to follow-up during the interim could not be included in this series by these criteria.

RESULTS

A total of 58 pleural effusion patients were found who had cytology Class IV or V reports on their effusion. Of this group, 47 had confirmation of their positive cytology through tissue examination, giving a raw correct diagnosis of 81 per cent.

The group of 11 patients without confirmation of their positive cytology reports was then evalu-

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ated. Using criteria set up initially, eight patients were excluded from the study. Four of these patients were lost to follow-up after periods ranging from discharge to four months later. The remaining four expired before a definite diagnosis could be established. In one of these patients, a tumor was seen at bronchoscopy which partially occluded his bronchus but biopsy produced only necrotic tissue. Another's biopsy was thought to be malignant but the tissue was not completely satisfactory for diagnosis. The third's effusion responded favorably to intrapleural nitrogen mustard (Mustargen) instillation but she went gradually downhill without a primary tumor being located. Even though these three patients were strongly felt to have malignant disease, they all expired before a tissue diagnosis was obtained, and so could not be included among the positives.

Three patients were felt to have a false-positive pleural effusion cytology. One of these (60-2215) was followed for three years with systemic lupus erythematosus without evidence of malignancy appearing. The second (60-613) was found at autopsy to have a ruptured aortic aneurysm and pneumonitis. The remaining case (60-389 and 462) was classed as a possible false-positive as he was followed for two and one-half years with only cardiac insufficiency to explain his effusion; however, he clinically appeared to have a malignancy. The corrected evaluation thus shows 3 out of 50 patients to have a false-positive pleural effusion cytology, or looking at it another way, 94 per cent were interpreted correctly. The three false-positives were all during 1960; none have been found since that time.

Positive peritoneal effusion samples were found at cytological examination in 41 patients. Thirty-four (83 per cent) were found to have tissue evidence of malignancy. Seven patients did not have tissue evidence of malignancy; these were evaluated for the possibility of their being falsely positive. Six patients were excluded because of lack of follow-up, though one was strongly felt to have a malignancy because of solid, bilateral adnexal masses. Two patients expired without a diagnosis; one of whom had a large flank mass but was not able to be explored. One patient (61-3547) was listed as a possible false-positive. She was unable to be explored because of an elevated prothrombin time and was lost to follow-up for about a year. She was then hospitalized out-of-state with no evidence of malignancy being found. No autopsy was obtained when she expired. With only one false-positive recorded, the corrected figures show 97 per cent to have tissue proved positive cytologies on peritoneal fluids.

When it was realized that several cases in this series had been called positive without tissue evidence of malignancy, it was felt that these slides should be reviewed by the pathologists in a "blind" manner. That is, the pathologists did not know the clinical history until after review of the slides. Several staff members and residents participated. Their findings are below:

(1) Case 60-613—There was uniform agreement that this should be a Class III. This patient expired and at autopsy was found to have a pneumonitis and a ruptured aneurysm.

(2) Case 60-389 and 462 (same patient)—Here the vote was split with the less experienced pathologists calling it a Class IV and the others Class III. The patient was followed in the clinic for two and one-half years with only cardiac failure to explain the effusion.

(3) Case 60-2215—This was felt to be a Class IV; the patient had lupus erythematosus.

(4) Case 61-3547 (peritoneal effusion)—This was felt to be a Class IV.

DISCUSSION

Mistakes in evaluating cytology have been made in the past and undoubtedly will be made again. However, when clinicians are more aware of the existence of mistake inducing situations, they can more fully evaluate their cytology reports. Mistakes in diagnosing cytology of serous cavity fluids are most often made in the following situations:

(1) Organizing exudates (this was probably at fault in case 60-613).

(2) Patients with collagen disease or generalized amyloidosis (as in case 60-2215).

(3) Patients with hepatitis or cirrhosis (as in case 61-3547).

(4) Patients who have received large doses of irradiation.

(5) Patients with effusion of long duration (as in case 60-389 and 462).

It should be pointed out that all of the false-positive cytologies were called Class IV by the pathologists who initially interpreted them. This points out the value of having two classes of "positives" and not using the system of "negative," "doubtful," and "positive" as is used in some hospitals.

We initiated this paper with the contention that positive pleural and peritoneal effusion cytologies are reliable and feel that 94 and 97 per cent correctness, respectively, supports this contention. However, a clinician should be aware of the possibility of a false-positive with a Class IV in the above situations. A Class V should not be a false-positive. We do not mean to imply that a serous

effusion cytology can or should routinely take the place of a biopsy in the diagnosis of a malignant condition. However, there are times when a Class V cytology may be the only evidence of malignancy, and decisions regarding therapy may have to be made on it alone. In any event, it is never out of place to ask a pathologist to review certain cytologies when his report does not complement the clinical impression.

SUMMARY

At the University of Mississippi Medical Center all positive pleural and peritoneal cytologies between 1960 and 1963 were reviewed for correctness. A total of 58 pleural and 41 peritoneal cytology patients were found and their records reviewed. After exclusions as mentioned in the text, it was found that the pleural fluids were 94 per cent correct and the peritoneal fluids 97 per cent. It is felt that these figures support the contention that these tests are reliable. Several conditions predisposing to a false-positive reading are mentioned. ★★★

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A HUNDRED TO SHOW

A gambler died and the funeral was well attended by his friends, including his former gambling associates. During the eulogy the minister said, "Lucky is not dead. He only sleeps."

From the rear of the chapel came the words, "I've got a hundred that says he's dead."

"I'll cover you," said another voice.

Pioneers in Mississippi Pediatrics

JO NEWELL ROBINSON, M.D.
Columbus, Mississippi

PEDIATRICIANS CANNOT CLAIM credit for the broad scope of child care in Mississippi for they belong to one of the youngest specialties in the state and see the smallest volume of patients in the pediatric age group. In this regard the general practitioner can historically assess both depth and range for the majority of child health care throughout the nation. Neither are physicians alone in their contribution to Mississippi pediatrics; allied groups such as trained nurses have given much of their skill. Individuals and agencies from the laity, as well as government, must be included in the narrative of early and recent history. Since the influence of scientific medicine initially came from Europe to the United States, a parallel account of these effects will be given so that we may compare our own progress, which is relatively recent. In fact, most of the pioneers in Mississippi pediatrics are still actively engaged in practice.

EVOLUTIONARY PHASES

There are well-defined ideological and chronological phases in the evolution of pediatrics and general medicine. The earliest knowledge was limited to *symptomatology*. Next to appear was *diagnosis,* based upon the causal factors of given disabilities. As the causes became known, ill effects could be averted through *prevention*. Exploring data for other methods of cure became known as *research*.[1] The latest incredible advances of specific drug therapy and definitive surgery (which now includes organ and appendage transplants) are the result of *group* or *team approach*. Bearing this sequence in mind, the pediatric enlightenment of Mississippi will be traced using printed and other recorded data wherever obtainable. However, "to isolate this narrative from writings only is like cutting a narrow strip from the center of a piece of tapestry and speculating upon the origin and purpose of the cut threads of patterns that may be found in it . . . (for) . . . the history of medicine is the history of humanity itself, its brave aspiration for truth, and its pathetic failures."[2]

Most of the pioneers in Mississippi pediatrics are still actively engaged in practice, notes the author. This is perhaps why little has been published on the history of the specialty in the state, he observes. He terms this essay "a quest for authentic data concerning the history of pediatrics in Mississippi."

Mississippi pediatrics, like David Copperfield, was born with a caul, being veiled in the obscure membranes of Afro-American mid-wifery and mother-wit back when the care of children was left entirely in the hands of women. A nurse was selectively chosen from those who had experienced child bearing themselves and who had proved capable of nourishing another infant as well as their own if the *first means* of the mother should fail. Mid-wifery was (and is to some extent even today) relegated to the older Negro woman who had "birthed" many children of her own and assisted many others. The art was often handed down from one generation to the other.

A knife was routinely placed beneath the mattress to "cut" the pains. A pierced coin, or perhaps just a cotton string without a pendant, was placed about the neck or extremities of the mother. As for baby care, an amulet which would effectively assault the olfactory sense must be worn, reeking without question to highest heaven if asafoetida were contained in the dangling tobacco sack beneath the chin. Strings of garlic and poultices, or vests, containing chopped onions

Read before the Section on Pediatrics, 96th Annual Session, Mississippi State Medical Association, Jackson, May 11-14, 1964.

were considered of benefit to everyone if the infant caught cold. Mustard soon came into use as a counter-irritant and was smeared between the double fold of the flannel appliance. Many aromatic substances were smeared on the chest, even as practiced today. Spider webs and soot coagulated excessive bleeding of the cord and a scorched cloth and band concealed it from view. Although instinctive, these crude attempts at hemostasis and antisepsis were based on *symptomatology*. The rest was voodoo. Indian herbs wrought further symptomatic relief.

EARLY PUBLICATIONS

Prior to the organization of the Mississippi Territory around 1800 few publications on a pediatric subject had appeared anywhere, and few black or white women migrating to new lands being cleared for the raising of cotton had been taught to read. Papers on childhood diseases were the first medical treatises in this country and were clearly written for the laity. Pioneer women missed all this handy advice, but their descendents in the 20th century would strike a bonanza of information on health in the women's magazines. Then, as now, physicians disapproved of free and unauthorized medical knowledge placed in the hands of the untrained. Many of the earliest settlers in Mississippi, other than debt-ridden English refugees, arrived from Charleston, S. C. Pediatric *diagnosis* was being discussed in papers by Lionel Chalmers, M.D., who published *An Account of the Weather and Diseases,* in which he described disorders of Southern children due to a humid climate.[3] No doubt the first medical influence to be felt in this area came from Charleston through physicians educated in the medical college there. The registers of the circuit clerk of Lowndes County contain the names of many early settlers from South Carolina, among them physicians whose libraries contained books on pediatric subjects.

DR. DEWEES

An early American Dr. Spock by the name of William Potts Dewees, M.D., published *A Treatise on the Physical and Medical Treatment of Children* in 1825, which reached 10 editions in Philadelphia, Pa. This text appealed to physicians and laity alike. A first edition copy was recently found in the effects of a Dr. Yates (pronounced Wyatt) who practiced in Lowndes County at Cliftonville, near the present Alabama state line. A fly leaf removed in repairing the badly damaged book was inscribed, "Charleston, South Carolina." The format of the book bears a resemblance to that of a latter day competitor, named Benjamin. Dewees numbered the sections for easy reference and was as voluble and articulate in his plea for moral and psychological tranquility as his modern counterpart. Paragraph 173 reads: "The hero, and the poltroon; the timid, and the daring; the humble, and the arrogant; the passive, and the active—all have received the first impulse of character, in the nursery." Paragraph 174 relates the sad case of a little girl seven years old "who had an irresistible desire to drink brandy, which she had contracted by drawing the breasts of a nurse, who was an habitual tippler."[4] He was at war against midwifery as practiced in his day and made so many pronouncements that few of his patients could feel safe in the hands of another physician. He was alarmed at the enormous infant mortality, attributing most of the responsibility to other doctors and the ubiquitous old wives of the household who spread their loathsome tales.

Another of Dewees's concerns was for the nutrition of the baby. Included in a glossary of technical terms is the word *pabulum,* of Latin derivation meaning food, primarily for children; its close similarity to the name of a well-known food is obvious. *Farinaceous* describes the mealy consistency of another baby food. Although vitamin D had not been discovered, he felt that seafood, including oysters, contained important calcific substances. The *second means* of feeding referred to the artificial, or prepared, formula consisting of diluted cow's milk to resemble more closely the milk of mothers after the addition of sugar. He was aware of the European literature which described formulas concocted from the milk of the ass and the mare because of its low fat content.

Glass bottles were in common use with tubes or reeds employed as pipettes or droppers. Dewees advocated bottles flattened on one side for positioning against the chin. He stressed frequent cleansing with hot water. Since vulcanized rubber products would not be available until the latter half of the century, he devised the following cover for the bottle, which he recommended in preference to the tube. "Let the extremity from which the child is to suck be covered with a (pickled) heifer's teat in preference to anything else. They can be procured of the best quality at No. 33 Market Street, Philadelphia, Pennsylvania. If the milk pass too freely, let the piece of sponge which is, or always should be, at its extremity, be either enlarged or more strongly compressed. Im-

mediately after the bottle has been used, let the nipple and the sponge be well washed, and kept until again wanted, in a little whiskey and water. When reapplied, let it be attached by a piece of clean thread, as the former piece will be sour." He recommended the preparation of breasts for receiving the baby at birth, by application of newborn puppies to toughen the mother's nipples prior to delivery. His prescription containing paregoric and asafoetida, listed in the National Formulary as Dewees's Carminative can be purchased to this day in Columbus drugstores. Mississippi doctors, using Dewees's "Bible" blazed the trail for pediatric advances that were to follow much later.

PATTERNS OF PROGRESS

Progress in medicine follows the pattern of urbanization, but in Mississippi this was much impeded by distance and ancient modes of communication. River traffic was considerably enhanced by the appearance of the steamboat, which travelled the "Old Man" on the western border of the state as well as the Tombigbee in the northeast. Mail routes such as the Robinson Road connected the Military Road built by Andrew Jackson through Columbus, to the Natchez Trace. Thus, communication outside with New Orleans, Mobile, Nashville, and still with Charleston, had an influence as physicians returned from medical schools in these cities to establish practices in and around towns along the travel routes soon being crisscrossed by railroads. Memphis became a bustling cotton market built on river trade, but unimportant to Mississippi medically. By 1850 people were turning to these physicians who were well acquainted with a vast number of new and important publications. Textbooks on pediatrics continued to emanate from Philadelphia, Pa., which was the primary source of literature for the Southern medical schools. There were departments in most of the schools for teaching "The Diseases of Women, etc.," the et cetera indicating a rising importance of pediatrics.

Scarlet fever reached epidemic proportion in America in 1856, and one text warned that should the practitioner undertake the care of sick children and especially those with fevers, it might be a good idea for him, on certain occasions to examine the patients' throats.[5] The same author (Condie) showed as much concern over infant mortality as did Dewees. Between 1835 and 1844 he reported the average infant mortality (under one month) had been 165 per 1,000 live births, gradually raising to 250 by 1860 in large cities, due to typhoid fever and other diseases manifested by diarrhea. Diphtheria became known as a separate entity from scarletina at this time; influenza and consumption were also recognized. These diseases were prevalent in the South as reflected in letters and diaries written during the War Between the States. Tetanus of the newborn, or "nine-day fits," was particularly prevalent in Mississippi as a result of contamination of the cord as previously mentioned.

Malaria was particularly indigenous to the Mississippi Delta. White women and children could not survive the humid summers in the low cotton lands due to this new disease which was felt to result from "bad air." A foreshadowing of *preventive medicine* was soon to appear. The New York Life Insurance Company, the only firm that would insure the life of a man from the Delta, recommended two ounces of bourbon whiskey each morning. It is understood that these ounces of prevention are popular in the Delta today, although in some quarters a more specific remedy of quinine water and gin have been substituted as a pleasant afternoon repast. Many women and children still resort to the mountains of Arkansas, Tennessee, and Carolina seeking respite from the long Delta summers, if not from malaria.

NINETEENTH CENTURY

The mid-nineteenth century physician added many new pediatric ailments to his knowledge, still without recourse to germs. Vaccination and revaccination for smallpox were being performed. Hospitals were being built throughout the South, primarily in conjunction with the medical colleges, although no children's wards, as such, had been opened. The date and the place of the first hospital established in Mississippi is of some doubt. It is a well known documented fact, however, that during the War Between the States many churches and private homes from Shiloh to Vicksburg were set into operation for taking care of a staggering census of wounded and sick, and operated by valiant women. Some of these continued to function as nursing homes, even when no doctor was available, and were nevertheless referred to as hospitals.

Childbearing and the care of children in Mississippi still took place in the home, presided over primarily by Negro midwives, when the first children's ward was established at Harvard, and when the controversial German refugee, Abraham Jacobi, opened the first pediatric clinic in New York.[3]

In 1868 the Mississippi State Medical Association held its first annual meeting. A few years before the war the physicians of Mississippi had

banded together in an attempt to get the legislature to create a state department of health which would encourage vaccination against smallpox and other preventive and welfare measures in the interest of children. They did not succeed immediately due to interruption by this conflict, but gaining strength in their new organization, they brought about the formation of the State Board of Health in 1877.

During these postwar and reconstruction years a keen interest in infant feeding became worldwide. Before the war a layman named Gail Borden, of Liberty, Miss., had devised a means of condensing milk. Thus it was made possible for doctors the world over to become infant "feeders" employing artificial sources of milk that could be stored and reconstituted when needed. This process was refined to include the canning of evaporated milk which would free women to participate in the industrial revolution, and forever free physicians from the *third means* of feeding and the duplicity of wet-nurses who frequently, if not always intentionally, short-changed their sucklings.

AMA SECTION

In 1888 the Section on Pediatrics of the American Medical Association was established; in the same year the American Pediatric Society was founded with Abraham Jacobi, the father of American pediatrics, as its head. Within the next ten years the Europeans would revolutionize medicine through *research*. Unfortunately, Americans had not yet developed the scientific method of investigation. In 1895 Louis Pasteur died after establishing his germ theory of disease. In the same year Roentgen discovered the x-ray. Medical educators in America early embraced European contributions. An obscure medical college in Davidson, N. C.,[3] no longer in existence, was among the first in the country to employ x-rays.

After the turn of the century modern pediatrics came into its own with the establishment of departments in most schools of medicine. The first full-time staff was appointed at Johns Hopkins in 1912. White House Conferences on Child Care when originated by Theodore Roosevelt provided relief for the socially handicapped through welfare organizations. However, during the administration of Woodrow Wilson in 1919, Herbert Hoover translated the findings of the White House Conference into action which included pediatric care and research.[6] Meanwhile, back in Mississippi, the State Board of Health was urging maternal nursing and the administration of toxin-antitoxin to prevent diphtheria. Negro midwives were taught rhythmical songs with gestures and handclapping so that they could recall their duties as they prepared for a delivery. Full-time pediatricians were beginning to erupt sporadically over the state.

PEDIATRICS IN 1929

In 1929 it was estimated that there were over 1300 physicians in the United States limiting their practice to infants and children.[6] Hospitals for crippled and handicapped children were being built over the country by fraternal and philanthropic organizations. Medical schools in many areas had built children's hospitals through the help of charitable organizations locally which still operate them today. Much experimentation in infant nutrition was carried on in these centers, but it was the Boston Floating Hospital, organized originally to take indigent children on excursions in the bay, which developed the first formula modified chemically to simulate breast milk in 1929.[7]

The American Academy of Pediatrics came into being in June, 1930. This is significant for us in that it stirred into action eight or nine pediatricians in Mississippi who were already interested in the aims of pediatric education and cooperation with other child health groups. They gathered informally at state medical meetings and through mutual interests discussed the creation of a state pediatric society. One busy practitioner, who became prominent later on as a representative of the profession from Mississippi, showed little interest at first, but later wrote in a letter that he would like to join in the effort. His name was Harvey F. Garrison, Sr., who was appointed to the Academy's original Committee on Legislation which has advised the Congress on bills concerning child care. For his committee's restraint and good judgment private medicine owes to this Mississippian a debt of deep gratitude for his fight against socialized medical reforms at the national level.[6]

He was present at the organizational meeting of the Mississippi State Pediatric Society in the Robert E. Lee Hotel, in the early spring of 1934. Others attending this meeting in Jackson were Drs. Noel C. Womack, Sr., J. K. Bullock, Guy Verner, Harvey F. Garrison, Jr., all of Jackson; F. G. Riley, George Lamar Arrington, Meridian; Joe E. Green, Laurel; R. E. Wilson, Greenville; W. P. Robert and Guy C. Jarratt, Vicksburg. Dr. Womack, the first to be honored by fellowship in the Academy, also became the first president of the Mississippi State Pediatric Society, which held

one or more scientific sessions annually for a period of 25 years. This group set immediately to work on an educational program visiting many areas of the state. Dr. Felix J. Underwood of the State Board of Health, shared in the teaching of prophylaxis against certain childhood diseases. Together these men weathered the storm of diphtheria toxoid and Sauer's vaccine for whooping cough. The usual furor developed over untoward reactions and schedules for administration, in the same manner that controversy would arise over Salk and Sabin vaccine circa 1955. They advised their audiences on the use of the new agent, a sulfonamide, in the treatment of bacterial infections.

INITIAL GROUP

The candor and camaraderie of this initial group was carefully recorded during the meeting on May 13, 1935. On the subject of the newborn, Dr. Green stated, "There are three things that enter into the early life of the baby that we cannot overlook, and the first thing is quiet, and I would say, quiet, Quiet, QUIET!" He favored blood transfusions, using the fathers as donors so he could watch them faint; he anticipated rooming-in and demand feeding for babies. Dr. Riley maintained that breast milk analysis was of little value and insisted upon low fat content in his formulas. He said, "Jersey cows have paid for one of the best homes in Meridian, but I have been accused of being interested in a Holstein dairy because of the low butterfat . . . the Eskimo can eat whale blubber and get by with it, but the Southern baby can't do it." Dr. Jarratt, the secretary-treasurer, summed up his feeling concerning bowel function when he declared, "Thank God for the constipated baby. He is never sick. It is not necessary that the child have a stool every day." Dr. Van Temple, a guest from Hattiesburg, recommended early anal sphincter examination in newborns, and Dr. Womack emphasized gentleness of resuscitation. An urgent need for the classification of anemias was voiced by Dr. Jarratt, who spoke on jaundice of the newborn. The Drs. Garrison, father and son, confessed their personal differences regarding the amount and the number of injections of Sauer's vaccine, while Dr. Riley took the conservative stand with the AMA on the routine use of this agent which produced severe febrile reactions. He uttered the lament of all physicians concerning medical recommendations by the lay press: "I think it is a crime to accept things that are written in magazines such as the *Good Housekeeping* which tells the people that it is an absolute preventive against whooping cough."

ADDITIONAL MEMBERS

In 1937 letters were written to Drs. Byron Alexander of Electric Mills, and Sam L. Brister of Greenwood, inviting them to become members. Drs. C. E. Roach of Greenville, and B. B. O'Mara of Biloxi were taken into the society in 1938, Dr. Charles Ward of Jackson in 1939, and Dr. E. W. Bulley of Vicksburg in 1940. The onset of World War II interrupted the growth of the society but regular meetings continued on a smaller scale. Making history for the distaff side in 1946 were Drs. Ruth Burroughs, Mary Clark, and Eva Linn Meloan who were the first women elected to membership. Following very soon were Virginia Small, Estell Magiera, Maria S. Mangold, and Catherine Brummett. By 1950 there were 25 women physicians in the state, many of whom were involved in pediatrics, not only in private practice but in preventive medicine and rehabilitation of handicapped children.

Through the years the annual meeting preceded the regular session of MSMA with its scientific program following a luncheon for the ladies and out-of-state guests. The list of visiting essayists included outstanding academic speakers from all over the country. Drs. Joseph Brenneman, Paul Hollinger, Stanley Gibson all of Chicago, Dr. Robert A. Strong of New Orleans, Drs. Hines Roberts, W. L. Funkhauser (whose evolution of medicine has been quoted freely in this paper), and Joseph Yampolsky all of Atlanta, Dr. Horton Casperis of Nashville, Dr. Edward Clay Mitchell of Memphis, and Dr. Alfred E. Walker of Birmingham, were among the visitors.

On the 25th anniversary of its founding, the Mississippi State Pediatric Society, as a separate organization, was dissolved through the mutual consent of its members. Its educational program and even its membership were the same as those of the American Academy of Pediatrics when the by-laws of the national organization were amended making it possible to form state chapters.[6] Dr. Harvey F. Garrison, Sr., had been appointed by the Academy as state chairman in 1938 to succeed Dr. Noel Womack, Sr., who had served in this capacity for eight years from the inception of the Academy in 1930. The former was chairman when the state chapter received its official charter in 1948 and relinquished this office to his son, Dr. Harvey F. Garrison, Jr., who was elected by the chapter in 1950 and served until the election of Dr. Guy C. Jarratt in 1962.

The establishment of a Section on Pediatrics at the annual meeting of MSMA was the primary purpose of the Mississippi State Pediatric Society before its dissolution in 1958. It guided the Section in its activities and procured the many outstanding speakers which appeared. Having served its function the society transferred its funds and roster of members and associate members to the state chapter of the Academy, which continues in the same capacity by sharing its guests with the Section on Pediatrics. The first program of the Section was prepared for the 1950 session of the Mississippi State Medical Association which met in Jackson. Approximately a dozen members of the old pediatric society and new state chapter appeared as essayists or critics, in addition to several out-of-state guests. Among the papers was a discussion of childhood poliomyelitis read by Dr. L. G. Horn of Vicksburg, who reported a grave and relentless pandemic destined to gain momentum and create a problem in disposition of cases. A "polio center" for the entire state had been set up in Vicksburg at Mercy Hospital, and clinical experiences were described. This enthusiastic session lasted over five hours without interruption.

CURRENT EVENTS

At the present there are 68 physicians in Mississippi who limit their practice to pediatrics. Fellows of the American Academy of Pediatrics have increased in number from 4 in 1934 to a total of 44 in this, the 35th year of activity in our state. Pediatric education and voluntary programs for the health and general welfare of children are the primary interest of the chapter, and all physicians are enjoined to participate in its activities, as associate members.

UNIVERSITY OF MISSISSIPPI

The University of Mississippi School of Medicine expanded from a two-year medical school to a four-year medical school in 1955 and the first third year class was admitted in September 1955. However, the University Hospital was opened on July 1, 1955. The pediatric service was run and plans were made for the school year by a committee of pediatricians located in Jackson since at the time no full-time staff had been appointed in pediatrics. The committee consisted of Drs. Harvey F. Garrison, Sr., Howard Nichols, Charlie Ward and Wilfred Cole. They put in a great deal of hard work and effort and time into this endeavor. Other pediatricians who helped as requested were Byron Alexander, Harvey F. Garrison, Jr., Jim G. Hendrick, Eva Linn Meloan, Noel C. Womack, Jr., and Henry C. Ricks, Jr.[16]

Blair E. Batson accepted the position as chairman of the Department of Pediatrics in August 1955. With his wife, Dr. Margaret Bailly Batson as acting assistant professor of pediatrics, he arrived in September 1955. There were no residents in the department that year.

Dr. J. Darrel Smith joined the staff in 1959, with subspecialty interest in endocrinology and metabolism. In the same year, Dr. David G. Watson joined the staff with special interest in cardiology and also in newborns. In 1961 Dr. Nell J. Ryan became the first graduate of the School of Medicine to join the staff and was named director of the Pediatric Outpatient Department and clinical director of the Birth Defects Unit. In 1962, Dr. J. M. Montalvo, who had been chief resident the previous year, joined the department with a particular interest in renal disease and endocrinology. A Well Child Clinic has been in operation since the beginning with Drs. Blair E. Batson and Cecil Jenkins in charge at present. For the past two years a combined Mental Retardation and Neurology Clinic has been conducted by Margaret Bailly Batson. Since 1956 Dr. Frank M. Wiygul has been in charge of a weekly Seizure Clinic. In 1962 Dr. Wilfred Q. Cole inaugurated a weekly Allergy and Cystic Fibrosis Clinic. Drs. Cole, Jenkins, and Wiygul are part-time. Many Fellows of the Academy within a radius of a hundred miles are listed in the current bulletin of the University of Mississippi as clinical assistant professors or instructors, frequently making rounds and attending clinics. The full-time staff are engaged in various research projects.

It is ironic that the first complete pediatric service was established in Mississippi a full hundred years after the first pediatric ward was opened in the United States. It is hoped that our uncomplicated agrarian environment will similarly lag for another hundred years, for in it has suddenly begun to flourish a medical, educational and literary heritage of which we can be justifiably proud, as we pass it along to the sons of the pioneers.

★★★

618 Main St.

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WARMTH OF WISDOM

A politician who had changed his views rather radically was congratulated by a colleague who said, "I'm glad you've seen the light."

"I didn't see the light," came the terse reply, "I felt the heat."

—The Morehead City (N. C.) *Cateret County News-Times*

Radiologic Seminar XXXVII: Pseudo Pulmonary Coin Lesions

ROBERT D. SLOAN, M.D.
Jackson, Mississippi

THE TERM PULMONARY coin lesion may be applied to any solitary, rounded radiopaque focus lying within the lung parenchyma. It may have a diameter of from a few millimeters up to several centimeters, and usually has well-defined borders separating it from adjacent lung tissue. By convention the term is not applied when multiple nodules are present, as in metastatic neoplasm, when the lesion has an obvious cavitary component, or when it is solidly calcified as in the healed primary complexes of tuberculosis or histoplasmosis. Coin lesion is a descriptive term of the radiologic appearance on any given film, but it should be apparent that the pathology is actually spherical in shape. If significant amounts of calcium are present within the lesion, it in all probability has a benign etiology, and it is important to stress the point that laminograms or body section studies are necessary before the presence of a significant calcium content can be excluded.

It is the noncalcium containing coin lesion in the adult which is of primary clinical concern. Such lesions are not infrequently detected in the asymptomatic patient on routine chest filming. In this situation some of these densities will represent a granuloma, in this area most commonly secondary to tuberculosis or histoplasmosis, but others will be due to a benign or malignant neoplasm. From a practical standpoint, the incidence of malignancy in these lesions in individuals above 40 is high enough so that in the absence of extenuating circumstances a thoracotomy is indicated.

The purpose of this presentation is to point out that all coin like densities on chest films do not represent pulmonary pathology. Specifically, film processing artifacts or shadows cast by structures outside the lung parenchyma may at times produce on a routine chest film a pattern which is indistinguishable from a true coin lesion.

The most commonly encountered pseudo coin lesion is due to the nipple shadow in the female projecting through the lower lung field (Figure 1). Frequently the pattern is bilateral, and this plus its relationship to the outline of the breast may give a clue as to its real nature. Occasionally, however, on a single film one cannot state with complete assurance that a given shadow does actually represent nipple.

Of more importance are the occasional skin lesions of the chest wall, such as lipomas, papillomas, moles or cysts which project above the surrounding skin surface and present on the radiograph as a mass of homogenous density projected through the lung parenchyma (Figure 2).

An apparent coin lesion, seen for the first time on a routine chest film, should always be checked before the physician or the patient is unduely alarmed. Not only should the skin on the anterior and posterior chest wall at the level of the interest be examined, but radiologically it is desirable to obtain a stereoscopic study of the chest, as well as indicated lateral and oblique projections, in an effort to define the exact location of the density. If a skin nodule of some type is found, a metallic marker may be placed on the lesion and secured by tape, with a repeat chest film to make sure that it corresponds with the density detected on the original film. ★★★

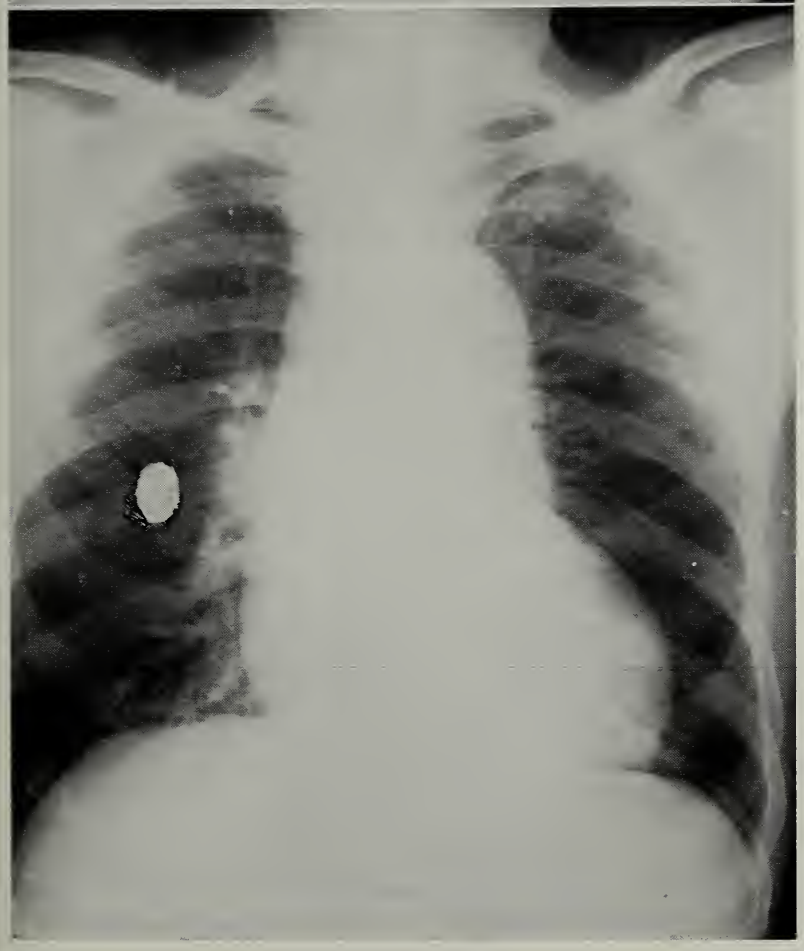
2500 North State St.

Sponsored by the Mississippi Radiological Society.
From the Department of Radiology, University of Mississippi Medical Center.

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Figure 1. The most common pseudo pulmonary coin lesion is produced by the nipple in the adult female. The pattern is usually present bilaterally, and the location overlying the lower lung field plus its relation to the soft tissue density of the breast mass itself usually makes the explanation obvious. Occasionally, however, one cannot on a single film state with certainty that the shadow seen does not represent a pulmonary lesion, and additional radiographs with the breast elevated or the nipple marked with a radiopaque foreign body are necessary. In the illustration the right nipple shadow has been retouched for purposes of illustration.

Figure 2. A routine chest film on a 65-year-old male with hypertension revealed a 3 cm. coin lesion lying just lateral to the right hilum (retouched for purposes of illustration). The patient's skin was rechecked, and a mole was found on the posterior chest wall, of approximately the same diameter and raised above the skin level for a distance of at least 1 cm.

Clinicopathological Conference LXIV

Winston County Community Hospital
Louisville, Mississippi

Dr. Kenneth M. Heard: "The patient was a white female infant, two weeks of age, who was brought to the hospital in the early morning of Feb. 13, 1964, with respiratory difficulty, a temperature of 103.6° F. and cyanosis. Shortly afterwards she began having convulsions. She continued to have convulsions and respiratory difficulty and remained cyanotic throughout the day. Death occurred at 2:10 p.m. on the date of admission. Laboratory work had revealed a white blood cell count of 44,200, with 1 metamyelocyte, 14 band neutrophils, 50 segmented neutrophils, 31 lymphocytes. The spinal fluid showed a cell count of 2200, with 96 per cent mononuclear cells and 4 per cent neutrophils. A Pandy test was two plus. The quantity was insufficient for determination of glucose.

CLINICAL DISCUSSION

Dr. Dewitt G. Crawford: "This case is one of an obvious meningitis or meningitis-like picture in a two-week-old infant. The only symptoms and signs given in the protocol are convulsions, respiratory difficulty, cyanosis, and fever. The findings in meningitis in the newborn period and early infancy may be somewhat more atypical than that found in older children and adults. There may be few, if any, findings referable to the meninges.

"The onset may be sudden or gradual. The most frequent symptoms are fever, vomiting, convulsions, and restlessness. Bulging of the fontanel is quite frequent. Convulsions occur often. Rigidity of the neck, Kernig's and Babinski's signs may or may not be present. Cyanosis and icterus may be present. If there is a favorable response to chemotherapy and antibiotics, the patient may recover in a few days. Sometimes, however, the disease becomes subacute, the patient literally wastes away, the cry is quite feeble, and hydrocephalus and opisthotonos may develop. There is usually a leukocytosis. The cerebrospinal fluid shows the same changes as in older infants and children suffering from meningitis.

Other causes of a meningitis-like picture which might occur in early infancy are intracranial birth hemorrhage, tetanus, extrathecal acute infections, especially otitis media, gastrointestinal disturbances, and nuclear icterus. With intracranial hemorrhage there is usually no fever except in the presence of a concomitant meningitis. There is no mention of bloody spinal fluid. Otitis media can cause similar symptoms; there is, however, no mention of this in the protocol, and I assume the ear-drums were normal in appearance.

The patient in CPC LXIV is a white female infant, two weeks of age, whose pertinent symptoms are respiratory difficulty, convulsions, cyanosis, and fever. Discussers are Dr. Kenneth M. Heard and Dr. Dewitt G. Crawford.

"Kernicterus can also produce similar symptoms. Usually there is no fever in this condition, and there is no mention of jaundice in this patient. Other conditions which should be considered would be acute plumbism in which symptoms such as we find in this case can be seen; however, this would be unusual in an infant so young. The Guillain-Barré syndrome should be mentioned, but this doesn't fit the spinal fluid picture here. Juvenile syphilis could have caused this—there is an increased cell count in the cerebrospinal fluid with elevated proteins. It would have been nice to have the results of a serological test for syphilis on the spinal fluid in this case. Lymphocytic choriomeningitis could be possible here; ordinarily the peripheral blood count would not be as high as it was in this case, however.

"The most common type of meningitis in the neonatal period is the purulent type, with a wide

and variable group of organisms having been incriminated. Members of the gram negative group are the commonest cause. Others listed include staphylococci, streptococci, pneumococcus, meningococcus, and *Hemophilus influenzae*. *Listeria monocytogenes* has been mentioned more frequently in recent years as a cause of neonatal meningitis.

In the group of so-called aseptic meningitides, several should be mentioned—the viral group, poliomyelitis, mumps, herpes simplex, herpes zoster, Coxsackie B, and the arthropod-borne encephalitides. Toxoplasmosis would be another consideration here, and studies on this would have been interesting. There are other areas that would be under consideration had the child been a little older, but these will not be mentioned here.

PATHOLOGICAL DISCUSSION

Dr. Heard: "Before beginning the discussion of the pathology, to emphasize the points made by Dr. Crawford regarding the obscurity of the clinical findings in meningitis during the neonatal period, I would like to read a statement by Dr. Sidney Gellis, editor of the *Year Book of Pediatrics,* in discussing a paper on this subject in the 1964-1965 year book:[1]

" 'We have repeatedly urged the free use of the lumbar puncture needle in any infant with fever of unknown origin or whose previously normal sleeping, feeding and behavioral patterns have suddenly and inexplicably altered. The only hope for improvement in the outcome of neonatal meningitis lies in the earliest possible diagnosis. The physician who uses the lumbar puncture needle only in those infants with signs of central nervous system involvement such as stiff neck or bulging fontanel will soon regret his conservatism. We are unable to comprehend the reluctance to use this lifesaving and physician-protecting procedure. We are quite willing to have our enthusiasm for the needle tempered in other areas—we love lung aspirations, bladder taps, and lymph node aspirations but have clear-cut indications for the use of the needle in these areas. However, we have no such indications for lumbar puncture, especially in the infant age group—here the needle must be used as soon as one finds no explanation for any abnormal symptoms or signs.'

"Quotation of this statement should in no way be construed as criticism of the management of the case under discussion, since the patient was obviously *in extremis* at the time of admission, and a lumbar puncture was done promptly.

"In the aforementioned paper[2] the authors, Yu and Grauaug of the Royal Alexandra Hospital for Children, Sydney, state that the commonest early symptoms of neonatal meningitis were an abnormal temperature, a change in feeding habits, abnormal behavior, including irritability and lethargy, and respiratory distress. They emphasized that convulsions and a bulging fontanel were noted *late* in the disease. Also, in their series 20 per cent of the babies had a subnormal temperature, and this was said to be more common in those who died.

"To proceed with the discussion of this case, this was a well-developed white female infant, apparently full-term, who presented no evidence of congenital anomalies externally or on examination of the organs. This is of some significance, since it has been pointed out by Nichols and Wooley[3] of the Children's Hospital of Michigan that predisposing conditions, namely prematurity or congenital anomalies, are present in the majority of cases of gram negative and staphylococcal meningitis. Their cases were somewhat selected, however, in that their hospital does not have the responsibility for management of a nursery population, hence the apparent lack of prematurity as a factor in cases due to some organisms, such as the causative agent in our case.

"The gross pathological findings in this case were limited to the brain, lungs, and kidneys. The brain was congested and swollen. A tenacious yellowish exudate was present in small zones on the tips of each temporal lobe. The meninges of the brain stem and cerebellum were congested and thickened with scattered small zones of exudate.

"The left and right lungs weighed 28 and 35 gm. respectively. The left lung appeared atelectatic, and was reddish-blue in coloration and meaty in consistency throughout. There was more patchy involvement of the right lung, which appeared fairly well aerated.

"Each kidney weighed 22 gm., with the cut surfaces of each swollen with diminished architectural markings of the cortex.

"Microscopically, all sections of both lungs showed thickening of the interalveolar septae in varying degrees in different portions. There was infiltration by reactive cells which were almost exclusively large mononuclear cells. Varying degrees of atelectasis were present with large zones poorly aerated and patchy zones present in which the alveoli were overdistended. In some of the more involved portions there was present within the lumens of the alveoli a small amount of amorphous eosinophilic debris in which some large

vacuolated macrophages were present. The findings were interpreted as diffuse interstitial mononuclear pneumonia with large zones of atelectasis (Figure 1).

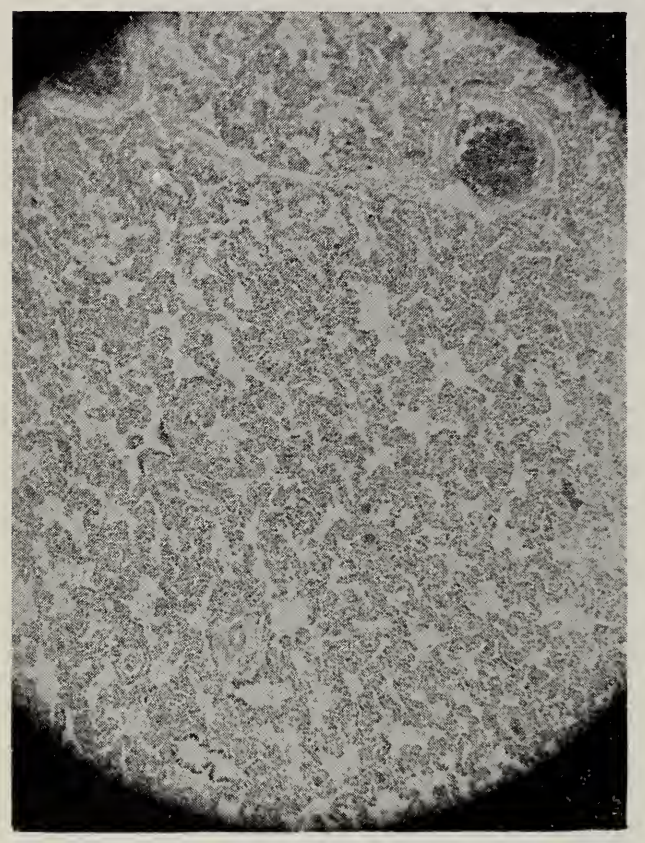


Figure 1. Diffuse interstitial mononuclear pneumonia.

"Sections of each kidney showed the presence of a severe inflammatory reaction which was predominantly interstitial. There was heavy infiltration with inflammatory cells, chiefly neutrophils, but some mononuclear cells were also present. Collecting tubules throughout contained large aggregates of inflammatory cells, principally neutrophils (Figure 2).

In sections of the brain, the involved portions of the meninges were markedly thickened due to infiltration with inflammatory cells, large mononuclear cells being particularly prominent with some neutrophils intermixed (Figure 3).

"A section of the thymus showed diminution in the amount of lymphoid tissue with Hassall's corpuscles appearing relatively prominent and numerous. The interstitial fibrous tissue also appeared quite prominent, and in the connective tissue there was infiltration by cells which appeared chiefly to

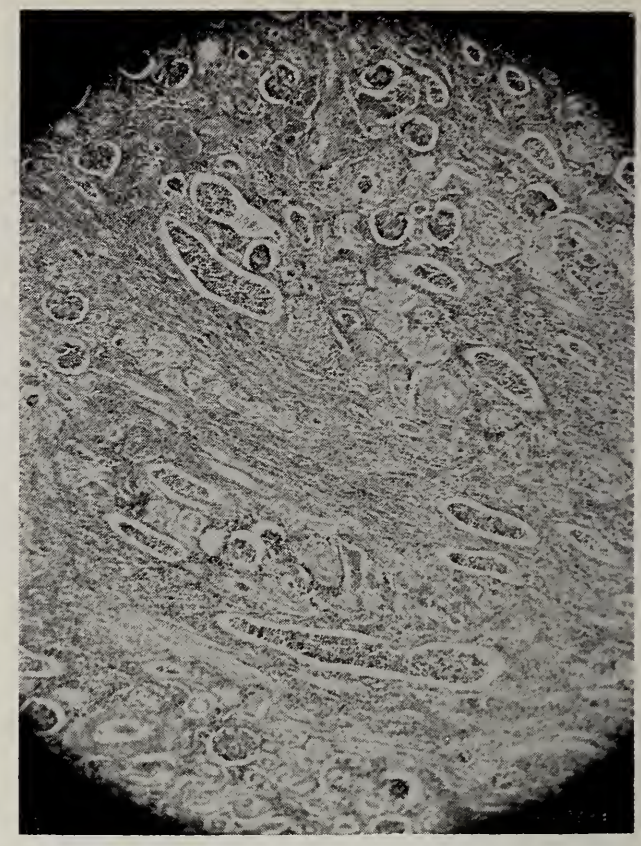


Figure 2. Hematogenous pyelonephritis.

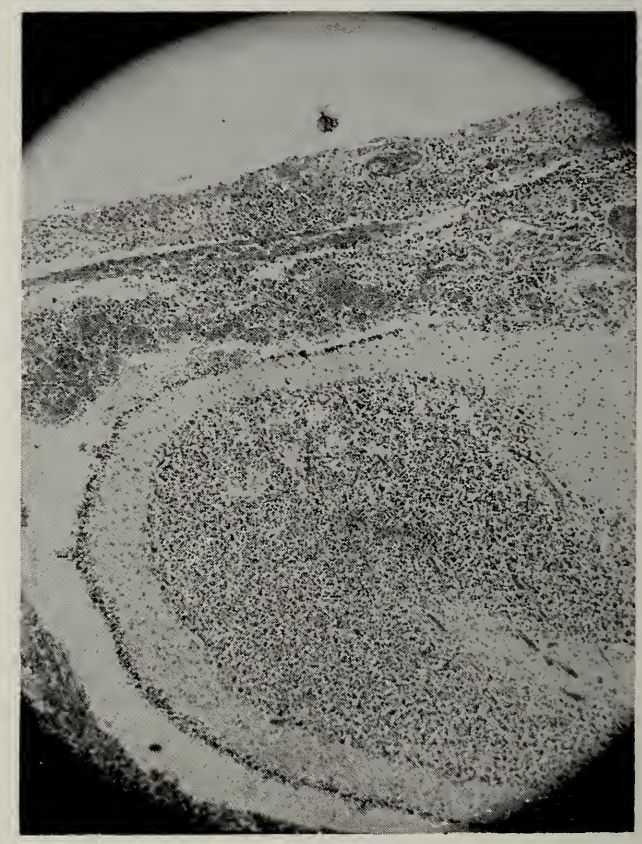


Figure 3. Surface of cerebellum showing dense inflammatory exudate.

be immature eosinophils, or eosinophilic myelocytes. This has been described as "exhaustion atrophy of the thymus," and indicates that the infection had been present for some time.

"Our bacteriological studies on the autopsy material were quite revealing. Direct smears of exudate from the brain surfaces showed scattered small gram positive bacilli. We were at once suspicious that this organism might be *Listeria monocytogenes,* and this was confirmed by culture. We were helped with the identification by the Bacteriology Laboratory of the Mississippi State Board of Health, the Communicable Disease Center and the Veterinary Research Laboratory of Montana State College. It should be pointed out that failure of the hospital laboratory to find the organism on direct smear is the story in many cases of Listeria meningitis. In fact, this should alert one to the possibility of this infection.

AN UBIQUITOUS ORGANISM

"Listeriosis is such a weird disease of such protean manifestations that I am almost at a loss to find a starting point in discussing it. This is quite an ubiquitous organism, affecting man and domestic and wild animals. The epidemiology is a story itself, and really too long to include here.

"The causative organism, *Listeria monocytogenes,* is a small, gram positive, nonspore forming rod. It is believed to be a relatively common cause of infection in man, with its failure to be recognized thought to be due partly to the fact that cultures have probably been discarded many times as "contaminating diptheroids."

"Another helpful point in identification is a peculiar 'tumbling' motility when incubated at room temperature. When placed into the conjunctival sac of laboratory animals, usually rabbits, a fulminating conjunctivitis or panophthalmitis results. This was discovered accidentally by a German researcher when a technical worker accidentally splashed some infected material into his eye.[4]

"Another important point in the bacteriology of this organism is the fact that it may be extremely difficult to isolate initially, although it grows quite readily on many media following isolation. This unquestionably accounts for many missed cases. To me, one of the most interesting things regarding this organism is the fact that following failure to obtain growth from suspected clinical material, isolation may be accomplished by repeated cultures of the suspected material at intervals following refrigeration at 4° C.[5] This may take two or three months. Fortunately, in our case the organism grew quite readily. There are other bacteriological features which are beyond the scope of this discussion. Sometimes it is beta hemolytic, sometimes not. Ours was nonhemolytic. There are certain biochemical and fermentation reactions which are outlined by Gray.[5]

"There are several serological types; ours was found to be Type 1. According to Gray,[6] there have been 629 known cases of Type 1 infection in the nation, with ours being the first from Mississippi.

"I have mentioned that listeriosis has many manifestations. Predominantly in humans it is a disease of the perinatal period and of the older age group. In the latter there is usually some predisposing debilitating disease such as neoplasia. Seeliger[7] lists several clinical forms of listeriosis including: septicemia with angina and mononucleosis, oculo-glandular, central nervous system, typhoid-pneumonic form, listeriosis of the newborn, listeriosis during pregnancy, cutaneous, and miscellaneous.

NEONATAL PERIOD

"Henceforth, I shall try to limit my discussion to listeriosis during the neonatal period. The incidence of neonatal infections is probably greater than suspected—I have given some reasons why this is true. In certain German hospitals where attempts have been made to determine its true occurrence rate, it has been found to be responsible for 5-6 per cent of neonatal deaths. In the Michigan series of neonatal meningitis cited above, it was incriminated in 17.4 per cent of the cases.

"Gray states that perinatal listeriosis may be manifested by abortion, septicemia, or meningitis which develops during the first few days or weeks of life following an apparently normal delivery. Abortion is said to be rather rare, particularly in this country. Our case, of course, had a septicemia with meningitis, pyelonephritis, and interstitial pneumonia.

The disease is transmitted transplacentally, with the mother often showing little or no evidence of the infection, including failure to develop antibodies. Gray[5] states that many mothers, however, experience a "flu-like" episode or symptoms of pyelitis or cystitis a few days or weeks prior to delivery. For these he recommends treatment with one of the tetracycline group of drugs for five to seven days in a dosage of 1.5-2.0 gm. daily.

"In closing, I would like to put in a word regarding treatment of suspected or proved neonatal

meningitis. This is one situation in which 'shotgun' antibacterial therapy is not only justifiable but indicated. A wide range of organisms can be responsible for neonatal meningitis, and 'covering' therapy should be instituted before the bacteriological diagnosis is confirmed. The drugs most frequently recommended are sulfadiazine, penicillin, and chloramphenicol and/or streptomycin. The selection of useful antibiotics is partly a matter of personal preference and experience and partly dependent upon help from the laboratory. It seems that the combinations suggested in the literature could be improved upon. Certainly sulfadiazine should be retained, although the meningococcus is rather uncommon cause of neonatal meningitis. Since ampicillin does everything the penicillin does plus hitting some of the gram negative organisms, its use should be considered. Remember that the gram negative group of bacilli remain as the commonest cause of neonatal meningitis.

"I have mentioned that the tetracycline group seems to be the most effective in treatment of listerial infections, and probably should be used, particularly if the organism is not seen or grown readily. Also in choosing a broad-spectrum antibiotic, it should be remembered that reports indicate that chloramphenicol may be toxic in the newborn, particularly prematures. In my rather limited experience with neonatal cerebral infections, usually meningitis or ependymitis, pseudomonas has been an important organism. It is hoped that one of the above-mentioned drugs would slow the organism down until sensitivity tests can be carried out.

"The final pathological diagnoses in this case were:

1. Generalized infection due to *Listeria monocytogenes,* serological Type 1, with the following manifestations:
 a. Cerebrospinal meningitis, predominately basillar.
 b. Diffuse interstitial mononuclear pneumonitis.
 c. Pyelonephritis and interstitial nephritis, marked.
 d. Exhaustion atrophy of thymus.
2. Cerebral congestion and edema. ★★★

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4. Anton, W.: Zentralbl. Bakt. I. Orig. 131:89-103, 1934.
5. Gray, M. L., Seeliger, H. P. R., and Potel, J.: Perinatal Infections Due to Listeria Monocytogenes, Clinical Pediatrics 2:614-623 (November) 1963.
6. Gray, M. L.: Personal Communication.
7. Seeliger, H. P. R.: Listeriosis, New York, Hafner Publishing Company, 1961.

HOPEFUL DESTINY

Two youngsters stood at the curb, waiting to cross the freeway as the cars whizzed by in a frenzied fashion. Finally one asked the other: "What do you want to be . . . if you grow up?"

MEETINGS

NATIONAL AND REGIONAL

American Medical Association, Annual Meeting, June 20-24, 1965, New York. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn, Chicago 10, Ill.

American College of Surgeons, Oct. 18-22, 1965, Atlantic City. John F. North, Director, 55 E. Erie, Chicago 11, Ill.

Southern Medical Association, Annual Meeting, Nov. 1-4, 1965, Houston, Texas. Mr. Robert F. Butts, Executive Director, 2601 Highland Ave., Birmingham, Ala.

STATE AND LOCAL

Mississippi State Medical Association, May 10-13, 1965, Biloxi. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Amite-Wilkinson Counties Medical Society, Third Monday March, June, September, December. S. E. Field, Centreville, Secretary.

Central Medical Society, First Tuesday, January, March, May, September, November, December, 6:30 p.m., Robert E. Lee Hotel, Jackson. James R. Cavett, Jr., B-6, Medical Arts Building, Jackson, Secretary.

Claiborne County Medical Society, First Monday January and July, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Third Wednesday March and First Wednesday November, 2:00 p.m., Clarksdale. Robert L. Forman, Coahoma County Hospital, Clarksdale, Secretary.

Coast Counties Medical Society, Second Wednesday January and July, First Wednesday March, May, September, November. Charles D. Taylor, Jr., 113 Davis Ave., Pass Christian, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Quarterly, 7:30 p.m., Natchez Country Club, Natchez. W. T. Colbert, Natchez General Hospital, Natchez, Secretary.

North Central District Medical Society, Third Wednesday March, June, September, and December. William E. Riecken, Jr., P. O. Box 831, Kosciusko, Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo. S. Jay McDuffie, Nettleton, Secretary.

North Mississippi Medical Society, First Thursday, April and October, Oxford. John P. McLaurin, Jr., 613 South Lamar Blvd., Oxford, Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. Joseph C. Griffing, Lucius Olen Crosby Memorial Hospital, Picayune, Secretary.

South Central Mississippi Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. James C. Bass, Jr., 424-13th Ave., Laurel, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg. Patrick G. McLain, 1301 Washington St., Vicksburg, Secretary.



The President Speaking

'Of Work and Years and Thanks'

OMAR SIMMONS, M.D.
Newton, Mississippi

THE 97TH ANNUAL SESSION is a matter of days and hours away as we conclude our 1964-65 association year. Almost to a man, the officers, Board of Trustees, and our several councils and committees express the belief that this has been a milestone in our 109 year history. Our work has seldom been more constructive, and never before have our official bodies undertaken such extensive activities. The accounting of stewardship in the House of Delegates will be given with pride.

Our Council on Scientific Assembly has organized an annual session which promises to exceed former hallmarks of excellence, and the new format of general sessions will bring more variety to more members than ever before. Specialty societies, medical alumni occasions, and planned recreation and fellowship make our 97th Annual Session a family affair. We earnestly hope for a new attendance and participation record for the Gulf Coast.

As my year as your President draws to a close, I have many expressions of personal appreciation and gratitude to make to many individuals. My deepest respect and esteem are given in maximum measure to our Board of Trustees and general officers. These leaders devote days to our association and the problems of its complex operation. They travel many miles, meet on many occasions for hours, and shoulder a burden of responsibility and leadership for you and me. I am grateful to the ladies of the Auxiliary, and my experience in working with them has been among the most pleasant during the year.

Let us all resolve to maintain this heightened pace and to give our 1965-66 leadership an even greater measure of support as our association realizes new and more significant achievements in the interest of the best medical care for all. ★★★

JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION

Volume VI, Number 5

May 1965

EDITORIALS

How America Is Spending Its Health Care Dollar

THE LARGEST PART of the American health care dollar goes to hospitals, while the professional provider's share continues to shrink. A new double decade study of care costs in seven vital service areas discloses that the hospital share zoomed from 18 cents to 28 cents during 1943-63, but this is, by no means, a true index of cost increase. The Consumer Price Index shows daily hospital costs to have risen from 30.2 on the 1957 base of 100 to 138 during the same period, a jump of more than 350 per cent. In the past 30 years, hospital costs are up about 480 per cent, and the end isn't in sight.

That portion of the health care dollar paid to professional providers who are physicians and dentists continues to decline. It's down a penny for physicians, from 26 to 25 cents, while the dentist who formerly claimed 13 cents now receives a dime. The increase in physicians' services over the 20 year span is only about 93 per cent, and dentists' services are only slightly more at 95 per cent.

The dramatic decrease is in that part of the care dollar which goes for drugs. In 1943, the share was 24 cents or 50 per cent more than was then paid for hospital services. In 1963, the cost position had more than reversed, and drugs claimed only 18 cents. Other areas studied included appliances, health insurance, and a catch-all category for nurses, various ancillary, and related health care services. Except for health insurance, the trend was shown to be down. Eight cents goes to health insurance, up a penny from 1943.

For the year 1963, the most recent for which complete data are available, Americans spent $375 billion for their personal needs. About 6.3 per cent or $23.6 billion went for all health care services. Of course, food, shelter, and clothing took the lion's share, and the outlay for transportation now amounts to 12.6 per cent or $47.2 billion with the nation on wheels.

There are interesting comparisons of how Americans interpret their personal needs, too. Within the health care total, about $5.9 billion were expended for physicians' services. But the same consumers paid out $11 billion for liquor, $8.1 billion for tobacco, $22.7 billion for recreation, and $6.5 for barber and beauty shop services.

It is important to understand that a given share in the health care dollar can decline despite the cost of the service going up in the same period. Most simply stated, this is explained by the simple fact that many more people are spending many more dollars on all personal requirements and that the division of the dollar in a given service area shifts. It is also important and significant that the mounting capabilities of physicians are more widely available to all for a progressively smaller

portion of available disposable income. With the device of prepayment plans and health insurance, this vital service is even more easily purchased.

The cold figures and economic facts of life seems to demonstrate the validity of a few propositions, not the least among which is that medical care is easily within the reach of all who earn within modal income limits. For those beneath these strata, there are programs of care provided from public sources. It is also apparent that purchase of personal requirements by Americans involves exercise of choice, and this is as it should be, for we aspire to be a free people. But dollar for dollar, America is getting its money's worth in health care services.—R.B.K.

Five Men of Courage

Mississippi's five members of the House of Representatives carried forward their tradition of loyalty to principle and unflagging determination to uphold their convictions when the administration's so-called Medicare bill came to the crucial test three weeks ago. Messrs. Whitten, Abernethy, Williams, Walker, and Colmer had long previously made firm decisions which were not altered in the face of lobbying pressures.

The Medicare package, much bigger and farther reaching than requested by the administration, is an amalgamation of several bills. It runs the gamut from King-Anderson to compulsory Social Security taxation upon physicians to medical care programs for preschool children. Even a Christian Science "sanatorium" can be paid under the law.

The fight began in the House Rules Committee where Mr. Colmer stood firm against the bill and the rule. He was the only Democrat to oppose it. On the crucial vote, a motion to recommit the bill to the Committee on Ways and Means, the Mississippi delegation joined in the 191 members who voted to return the measure to committee. Two hundred thirty-six opposed the motion, and the bill passed the House 313 to 115 with many voting for it as a matter of political expediency. Not so with the Mississippians who stood firmly committed to their principles.

We applaud and salute these Congressmen who, in the face of overwhelming odds, stand by what they believe with courage, integrity, and conviction.—R.B.K.

Voluntary Testing For Phenylketonuria

Acting on an action by the AMA House of Delegates at the Miami Beach clinical convention in 1964, the AMA Committee on Maternal and Child Care has urged each state medical association to encourage voluntary testing for phenylketonuria in the newborn. Our state medical association's committee concerned with this same sphere of activity has viewed the request with favor.

The interest of Mississippi physicians and our association in PKU detection extends over many years. At our 94th Annual Session in 1962, our House of Delegates, on recommendation by the Council on Medical Service, adopted a policy urging that "a phenylketonuria detection program be organized and implemented by private physicians and hospitals. . . ." Testing by public health sources was approved only where delivery was accomplished by a midwife.

Phenylketonuria is a hereditary metabolic disease characterized by a defect in an enzyme system which converts amino acid phenylalanine into tyrosine. Since phenylalanine constitutes about 5 per cent of most protein foods, a rich concentration is found in the blood, spinal fluid, and urine. The disease almost always produces brain damage and mental retardation in affected children.

It is generally agreed that the defective gene



"Most children only swallow the money."

producing PKU is inherited as a Mendelian recessive trait. Where children are victims of the disease, both the father and mother must carry the offending gene. In a family with four children from such a union, it can be expected that one child would be normal, two children would be carriers of the gene, and one would be affected with the disease. Since about 1 out of 80 persons carries the gene, the probability of one carrier marrying another is estimated to be $(1:80)^2$ or 1 in 6,400 marriages. The incidence of affected children is about 1 in 10,000 live births.

PKU is now considered a treatable disease by making use of a special diet low in phenylalanine. The management may be discontinued after the brain has attained most of its growth, but such a decision should be made by the attending physician. Various simple and inexpensive tests for PKU detection are available, including the ferric chloride test, filter paper screening test, Phenistix® (Ames), and dinitrophenyl hydrazine test. Each of these is designed to detect phenylpyruvic acid in the urine. The disease may be discovered in the newborn by the age of about four weeks.

The association's policy has merit and can contribute to the goal of healthy human reproduction in which all physicians have a deep and continuing interest.—W.M.D.

Repackaging House Stock: Unprofitable and Unethical

A pharmaceutical phenomenon of the mid-20th century has been the drug repackaging company, and there are as many variations of its classic pattern as there have been firms organized. As a general rule, repackaging promoters have solicited physician purchase of company stock with the hope of their prescribing the organization's products. Only a small minority of physicians have responded favorably to such solicitations, and it is highly doubtful if more than a very few of the minority favored the repackaged products over another similar drug.

Most of the repackaging concerns have been notable failures as business undertakings. A recent investigation of repackaging companies by the Senate Subcommittee on Antitrust and Monopoly disclosed that a majority of such firms have never paid a dividend, and their stock certificates are little more than wallpaper. Certainly, the repackaging operations have never posed any substantial problems in competition to the major pharmaceutical manufacturers.

As a rule, a repackaging firm, once organized, contracted with a generic drug maker to supply its products. For the most part, these are "catalogue items," in the parlance of the drug industry, the old, established agents never seen in the advertising pages of a medical journal. Of course, there were a few current items, especially oral dosage forms, which competed to some extent with products of the major houses. Most repackaging firms, it is obvious, conducted no research, developed no original products, and contributed little, if anything, to the chemotherapeutic armamentarium.

In 1963, the Judicial Council of the American Medical Association, after careful review of the character and nature of these endeavors, ruled that "it is unethical for a physician to have a financial interest in a drug repackaging company." The ruling was approved by the AMA House of Delegates. Now, the Congress is looking into these operations, and the recent investigations brought forth a printed record naming firms, operators, and physician-investors.

Those few physicians who, in good faith and without intent of violating the *Principles of Medical Ethics,* purchased stock in repackaging companies will do well to review their participation in such corporate endeavors in the light of medicine's judicial posture and the Senate investigations.—W.M.D.

PERSONALS

LOUIS LEHMANN, pediatrician, and HALL H. RATCLIFFE, JR., general and thoracic surgeon, have joined the staff of the Medical Associates Clinic in Natchez.

ROBERT RAY MCGEE of Clarksdale, has announced the association of WALTER T. TAYLOR in the practice of internal medicine and cardiology.

A. F. Moss has assumed the presidency of the Laurel Rotary Club. He had served as vice president during the past year.

WILLIAM G. RILEY of Meridian has announced the association of JOHN D. MCEACHIN in the practice of pediatrics.

WALTER ROSE has resigned as health officer for Sunflower County. Effective July 1 he will be associated with the Hull Brothers Clinic.

Ob-Gyn Board Sets Part II Exams

The American Board of Obstetrics and Gynecology has announced that the next scheduled Part I written examination will be held at various examining centers in the United States, Canada, and military bases outside of the continental United States on Friday, July 2, 1965, at 10:00 a.m.

Applications received for the next Part II examination to be given in Chicago in April of 1966 will be reviewed by the Credentials Committee in September and notifications will be mailed to candidates on or about October the first.

The 1965 Bulletin outlining current requirements should be available upon request about July the first. Application forms and Bulletins may be obtained by writing Dr. Clyde L. Randall, Secretary and Treasurer, American Board of Obstetrics and Gynecology, 100 Meadow Rd., Buffalo, N. Y. 14216.

State Morbidity Reported Through April 2

The Mississippi State Board of Health reports the following occurrence of morbidity for 1965 through the 14th week of the year, ending April 2, 1965. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul.	423
Tuberculosis, O.F.	10
Typhoid fever	2
Encephalitis, infectious	7
Septicemia, Staph.	2
Dysentery	
Bacillary	13
Amoebic	1
Dysentery, NOS	2
Meningococcal Infections	9
Diphtheria	1
Mononucleosis, infectious	17
Hepatitis, infectious	83
Tetanus	2
Helminthic infections	
Hookworm	293
Ascariasis	97
Meningitis, O.F.	14
Histoplasmosis	2
Other Cestode Infestations	4
Salmonella Inf.	4
Gastro-enteritis	1
Streptococcus infections	
Scarlet fever	21
Strep throat	1,385
Pertussis	7
Measles	828
Chickenpox	204
Mumps	235
Influenza	5,868
Gonorrhea	1,341
Syphilis	
Early	172
Late	30

Two Named To UMC Faculty

New faculty members named to the University of Mississippi School of Medicine this spring are Dr. Charles H. Walkinshaw, assistant professor, and Dr. Joseph S. Layne, instructor in microbiology.

Dr. Walkinshaw has been a plant pathologist with the U. S. Forest Service at Gulfport since 1963. He attended the University of Florida, got his Ph.D. at the University of Wisconsin and did postgraduate work for three years.

Dr. Layne has completed all of the requirements for his Ph.D. degree which he will receive in the 1965 UMC Commencement. He has a B.S. degree from Marshall College, Huntington, W. Va., and an M.S. degree from the University of Arkansas.

DEATHS

PEARSON, SILAS WESLEY, Louisville. M.D., University of Tennessee College of Medicine, 1915; interned City of Memphis Hospitals, Tenn., one year; died March 14, 1965, aged 73.

WATSON, WILLIAM HARVEY, Brandon. M.D., Tulane University School of Medicine, New Orleans, La., 1910; Emeritus Member of MSMA and member of the Fifty Year Club; died March 26, 1965, aged 81.

Book Reviews

Industrial and Traumatic Ophthalmology: Symposium of the New Orleans Academy of Ophthalmology. By Arthur H. Keeney, M.D.; Hedwig S. Kuhn, M.D.; Roderick Macdonald, Jr., M.D.; Frank W. Newell, M.D.; Joseph F. Novak, M.D.; Ralph W. Ryan, M.D., and Lorenz Zimmerman, M.D. 303 pages with illustrations. St. Louis: The C. V. Mosby Company, 1964. $14.50.

This record of the Symposium held at the 12th annual session of the New Orleans Academy of Ophthalmology, Feb. 10-15, 1963, is presented by ophthalmologists who have been uniquely successful in the practice of various phases of traumatic and industrial ophthalmology and is indeed timely and beneficial. The chapters are as follows: (1) Professional participation inside industry, (2) Are the eyes right for the job? (3) Making the job easier and safer to see, (4) In-plant emergency eye care, (5) The ophthalmology of driving, (6) Automotive trauma—the second impact, (7) Contusion and concussion injuries of the eye and adnexa, (8) Head trauma—orbital fractures, (9) Head trauma—pulsating exophthalmos, (10) Chemical eye hazards in industry, (11) First aid care and medical therapy of chemical injuries to the eyes, (12) Elimination of and protection against chemical eye hazards in industry, (13) Radiant energy and the eye, (14) The eyes in protective custody, (15) How disabled is the injured eye? (16) Pathology of ocular trauma, (17) Traumatic glaucoma, (18) Post-traumatic inflammatory processes. A transcript of the round table discussion is appended.

Each chapter is well illustrated and followed by an extensive bibliography. The role of the consulting ophthalmologist in determining "the right eye for the right job" by both statistical and empiric methods and in making the job easier and safer to see by improving both the vision of the seer and the visibility of the work, is described in detail. The do's and especially the don'ts of in-plant care of eye injuries and the means of elimination of and protection against eye hazards are reviewed.

In the chapter on The Ophthalmology of Driving, the individual visual factors involved in driving are reviewed. The author states that the Federal Aviation Agency has discontinued all tests for depth perception, even in Class I (commercial) medical certificates, and he feels that these need not be a part of routine driving tests. On the other hand, determination of the horizontal field is essential. The data of the Automotive Crash Injury Research Program are reviewed and reveal the fact that 9.8 per cent of the persons injured sustained an ocular or orbital injury. The role of seat belts, harnesses and "safety glass" are reviewed. The materials which contact and affect the external eye structures, as well as those materials which, by various means, reach the internal eye structures and cause damage are classified and discussed.

In general, eye injury tends to increase with the concentration of harmful material to which the eye is exposed and the length of time of exposure. For this reason, first aid care at the place of injury is of paramount importance in eye injuries of this type. Various types of equipment for providing this care are discussed, as well as the role of the industrial nurse and the consulting ophthalmologist. One chapter is devoted to the elimination of and protection against chemical eye hazards in industry. Determination of disability is discussed in detail. The effects of radiant energy from various sources are described. The sections on the pathology of ocular trauma are very instructive.

In my opinion, this book is a definite contribution to this field of ophthalmology and, at a time when all of us are being called upon to do more of this type work, it is a real asset to the library of any ophthalmologist.

LYNE S. GAMBLE, M.D.

Dynamic Pathology, ed. 1. By Maurice M. Black, M.D., and Bernard M. Wagner, M.D. 296 pages. St. Louis: C. V. Mosby, 1964. $8.00.

This is the initial edition of an attractively bound, compact volume of interest primarily to pathologists or those with an interest in pathology. The book is not a textbook of pathology in the usual sense but rather presents multiple facets involving both clinical and anatomical pathology with some relationship to physiology and biochemistry. The bibliography at the end of each chapter is good with a brief comment on the better references which also include recent movies

and how and where to obtain them. The book, in the authors' words is not meant to be a substitute for textbooks in pathology but to present an interesting correlation of various concepts of pathology with the hopes that these will "help impart the sense of beauty and excitement which should be engendered by the study and practice of medicine."

The authors of the book are obviously well versed in basic pathology. Any errors appear to be those of format rather than of content. It is somewhat difficult to determine what group the book is primarily intended for. It presumes a basic knowledge of pathology and clinical medicine beyond that of the beginning student, and one fault of the book perhaps, is its attempt to touch upon too many points too briefly. However, these would perhaps serve for discussion material for residents or senior students.

There are many interesting brief digressions and undeveloped and unthought of paths are touched upon. One of the authors is a disciple of Klemperer and his provocative influence is somewhat felt.

Photographs are sparse but of excellent quality, and the index is also excellent. On the whole the book is highly recommended.

DANIEL TRISS, M.D.

AMA Meet Will Have International Flavor

The 114th annual convention of the American Medical Association June 20-24 in New York City will have an international theme throughout the scientific programs.

"In keeping with the New York World's Fair, already drawing many thousands of foreign tourists to the city, the AMA has scheduled eminent foreign physicians to deliver lectures at the scientific meetings to be held during the convention," said Dr. J. Arnold Bargen, chairman of the AMA's Council on Postgraduate Programs. The Council directs planning of the scientific programs for the convention.

In addition to program participants, large delegations of physicians from many foreign nations will attend the convention and participate in the scientific sessions. Large groups from Japan, Mexico and many other nations already have indicated that they will attend.

"American physicians will have an opportunity at the New York convention to meet and mingle with other physicians from throughout the world, and to learn of current medical knowledge in other lands," said Dr. Bargen.

"We are proud of the fact that the United States now leads the world in medical science. Thousands of foreign doctors come to our shores every year for graduate study and training. More than 2,000 American physicians are serving in foreign lands as representatives for various governmental and private medical programs. Foreign physicians have much to learn from American medicine, and at the same time there is much that American doctors can learn from the many fine professional men in medical science in other lands," he said.

The New York World's Fair has been widely publicized throughout the United States and in the rest of the world. Many physicians, both from this nation and other lands, look to the June convention of the AMA as an opportunity to combine a visit to the World's Fair and intensive postgraduate study by means of the scientific lectures, films, color television and exhibits, Dr. Bargen said.

The six general scientific meetings of the convention will offer the latest research developments in adverse drug reactions; organ transplantation; hearing; nonnarcotic drug addiction; metabolism in growth development and aging, and diagnostic cytology.

Final Session Set In Circuit Courses

May 18 is the final session in the UMC Circuit Courses series, a broadening program which reaches more physicians, covers more territory, and takes more time than ever before.

This wind-up in the bimonthly Laurel series will be held at the Laurel Country Club at 7 p.m., scheduled with the regular meeting of the Jones County Medical Society, with other interested physicians invited. Dr. B. T. Hickman, associate professor of radiology, and Dr. John R. Bise, clinical instructor in obstetrics-gynecology, will talk about radiological management of cervical carcinoma and problems in detection of early cervical cancer.

The MSMA-sanctioned series is approved for category 1 credit by the Mississippi Academy of General Practice. Squibb pays expenses.

MSMA-St. Paul Program Leads Nation; Liability Rates Reduced for Third Time

The third reduction in professional liability insurance premium rates since 1961 was announced by the St. Paul Companies, underwriters and carriers for the Mississippi State Medical Association

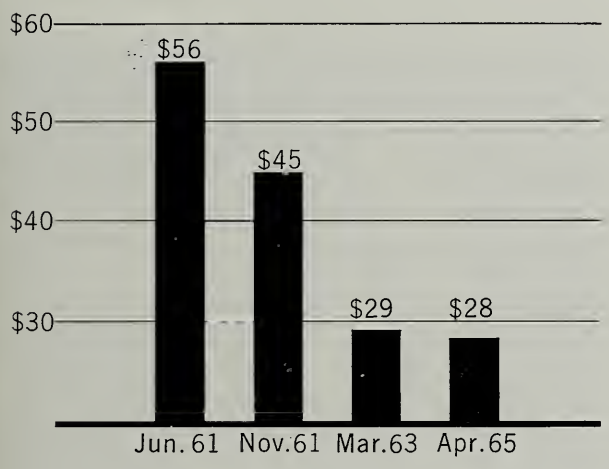


Figure 1. Professional liability insurance premiums under the MSMA-St. Paul program have decreased 50 per cent on the basic 5/15 nonsurgical coverage since Nov. of 1961. Annual dollar savings on 100/300 limits is $57 per policy.

membership plan. The new and lower rates became effective April 1, immediately following approval by the State Insurance Commission.

The basic 5-and-15 coverage dropped to $28 per year from those who do no surgery, to $35 for Class II physicians who perform minor surgery and obstetrical procedures, neither constituting major surgery, and to $68 for surgeons in Class III. The overall premium decreases since inception of the MSMA-St. Paul program are 50 per cent for nonsurgeons and 49 per cent for those doing surgery. Basic premium levels in 1961 were $56 for the former category and $134 for the latter.

The formal announcement was made at the April meeting of the state association's Board of Trustees by Dr. Omar Simmons, president, and Dr. John B. Howell, Jr., chairman of the Board. The program, including liability review services, is under the supervision of the governing body.

Drs. Simmons and Howell pointed out that competing insurance carriers, until such time as they can and will qualify for the new lower rates, will be charging about 4 to 10 per cent higher premiums than the membership plan offers. Apart from lower premiums, the St. Paul program affords a number of collateral advantages. For example, anesthesiologists are classified in category III by St. Paul with basic coverage premium set at $68 per year, whereas other carriers classify this specialty in category IV, requiring payment of $112 annually.

No reduction was effected in Class IV, those

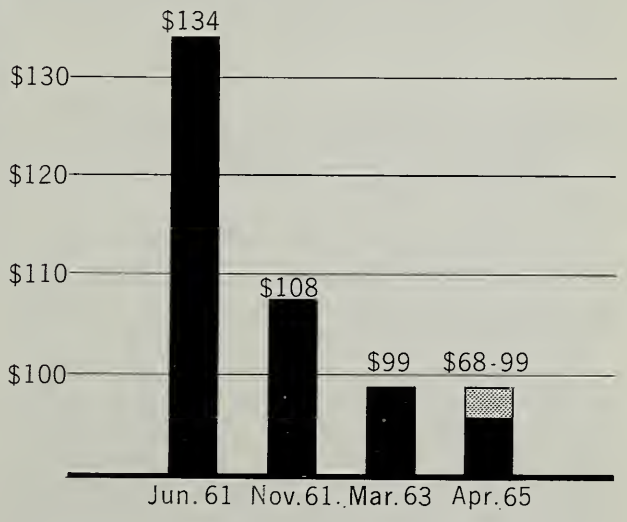


Figure 2. Coverage costs for surgeons is down 50 per cent in the St. Paul program just over three years for a maximum possible decrease of 49 per cent. Dollar savings brought about by the plan for MSMA members range from $72 to as much as $135 per year in these classifications.

doing all surgical procedures, and the basic rate of $99 remains effective. J. O. Vincent, state agent for the St. Paul Companies, pointed out that the March 1963 downward rate revision placed premiums for this category almost 12 per cent below competing companies. Dollar savings on 100-and-300 usual limits now total about $57 per year for nonsurgeons and from $72 to as much as $135 per year for those doing surgery, all amounts being based on prevailing premium rates effective upon the inception of the St. Paul plan.



J. O. Vincent, center, state agent for the St. Paul Companies, discusses the new liability rates with Dr. John B. Howell, Jr., left, chairman of the MSMA Board of Trustees, and Dr. Omar Simmons, MSMA president. On April 1, St. Paul, underwriters and carriers for the MSMA membership plan, put into effect the third reduction in professional liability insurance premium rates since 1961.

The announcement said that member-participants would be billed at the new and lower rates for professional liability coverage at the next anniversary date of their respective policies.

Drs. Simmons and Howell said that in the past two years, professional liability insurance premiums have been increased in 16 states, have remained the same in 31 states, and have been reduced in only three states. These are (with percentages of reductions during April of 1963 through April of 1965) Mississippi, 19.6 per cent; and Missouri and Wisconsin, 10 per cent each. It was pointed out that MSMA, under the association-sponsored program, leads the nation in this service to physician members.

Board of Health Sets Licensure Exams

The Mississippi State Board of Health will conduct medical licensure examinations on June 14 and 15 at the Heidelberg Hotel in Jackson.

Examinations on the first two years' study of medicine are scheduled for June 14 and on the last two years of study for June 15. Examinations begin at 8:00 a.m. each day.

For further information contact Dr. A. L. Gray, secretary, Mississippi State Board of Health, Jackson, Miss.

Dr. Phillips Is LSU Candidate

Dr. Jack H. Phillips, Natchez orthopedic surgeon, is one of ten candidates for office in the Louisiana State University Alumni Federation's national election.

An active worker in alumni affairs, Dr. Phillips is a candidate for the alumni representative on the athletic council. Dr. Phillips was organizing chairman for the Natchez Alumni Chapter, was chairman of the "Search for Scholars" program in Natchez, and has served as alumni fund chairman for the Natchez area.

Members of the LSU Alumni Federation may vote by mail or in person on Spring Alumni Day, May 1, in Baton Rouge.

A native of St. Francisville, La., Dr. Phillips received his medical degree from LSU in 1946. He is a Diplomate of the American Board of Orthopaedic Surgeons and a member of the American Academy of Orthopaedic Surgeons, the Pan American Association, and the Southeastern Surgical Congress.

Medical Groups Back Long Bill

United States Senator Edward V. Long (Dem., Mo.) has introduced a bill, S. 1353, to exempt physicians and nonprofit community blood banks from the jurisdiction of federal antitrust laws.

Eight other senators joined Senator Long in sponsoring the measure, and it has support of the American Association of Blood Banks, American Hospital Association, American Medical Association, and American Public Health Association.

The other sponsors are Senators Frank Carlson and James B. Pearson of Kansas, Hugh Scott of Pennsylvania, and John G. Tower of Texas, Re-

publicans; and Senators Spessard L. Holland of Florida, Eugene J. McCarthy of Minnesota, Gaylord A. Nelson of Wisconsin, and Stuart Symington of Missouri, Democrats.

The bill is a consequence of the decision of a Federal Trade Commission hearing examiner finding the Kansas City Community Blood Bank "in restraint of trade" in competing with two local commercial blood banks. The full Commission has not yet made a decision. Senator Long introduced a similar bill in the 88th Congress, but it did not come to a vote.

"Our antitrust laws," says Senator Long, "were meant to apply to economic and profit-making business activities, not to nonprofit, medical services such as blood transfusion."

University Receives $11,000 In AMA-ERF Gifts



Dr. Raymond Grenfell, right, chairman of the MSMA Committee on American Medical Association Education and Research Foundation, presents Dean Robert Q. Marston of the University of Mississippi School of Medicine a check for $11,483.28. This figure, said Dr. Grenfell, represents $7,815.70 in designated gifts plus UMC's share of undesignated contributions. This year each four year school received $3,667.58 in undesignated funds. A grand total of $1,313,559.31 is being distributed by AMA-ERF to medical schools this year, said Dr. Grenfell. He noted that this amount is approximately $100,000 more than the distribution total last year. The presentation was made at the April 8 meeting of MSMA's Board of Trustees.

State Diabetes Association Chartered



Dr. Karleen Neill (right), instructor in medicine at the University of Mississippi School of Medicine, has been elected the charter president of the Diabetes Association of Mississippi. Dr. Alton B. Cobb (left), director of chronic illnesses services at the Mississippi State Board of Health, is the secretary-treasurer. Dr. G. S. Barnes of Columbus (not pictured) was elected vice president and Dr. W. Johnson Witt of Jackson; Dr. John D. Wofford of Greenwood, and Dr. William J. Huddleston of Hattiesburg were named to the executive council. Speakers at the organizational meeting and scientific session (center), were Dr. Howard F. Root, medical director of the Joslin Clinic in Boston, Mass., and Miss Mildred Kaufman, nutritionist with the diabetes and arthritis branch of the U. S. Public Health Service.

Thoracic Society Meets For 1965 Session

The Mississippi Thoracic Society convened April 15 for its annual meeting at the University Hospital in Jackson.

The session followed the Mississippi Tuberculosis Association's annual meeting on April 14.

Program for the seminar, directed by Dr. Jesse L. Wofford of Jackson, state president, included papers on "The Interpretation of Ventilatory Function Tests" by Dr. William Miller of Dallas; "The Preoperative Management of the Pulmonary Cripple" by Dr. Lester Rumble of Atlanta, and "Two Thoracic Surgical Cases" by Dr. James D. Hardy.

AUXILIARY

AMA, SMA Officers To Attend State Meet

Special guests for the 42nd Annual Session of the Woman's Auxiliary to MSMA will be Mrs. Richard A. Sutter of St. Louis, president-elect, AMA Auxiliary, and Mrs. Jordan Kelling of Waverly, Mo., president of the Southern Medical Association Auxiliary.

Mrs. Sutter and Mrs. Kelling will address the Tuesday, May 11, sessions and Mrs. Sutter will install the new MSMA officers.



Mrs. Sutter

A long-time leader in auxiliary work, Mrs. Sutter served two years as a regional vice president (north central region) for the AMA Auxiliary. She was regional chairman of the AMA Mental Health Committee for three years and chairman for two terms, 1960-62. She has continued as a board member of her county auxiliary since her presidency in 1948-49, and has been on the Missouri Auxiliary board since her presidency in 1952-53.

A native Missourian, Mrs. Sutter is a graduate in economics of Washington University. She was married in 1935 to Dr. Sutter, who is a member of the AMA Council on Occupational Health.



Mrs. Kelling

Cited by the St. Louis *Globe-Democrat* as "Woman of Achievement" in 1961 as a "Good Citizen," Mrs. Sutter is also the first woman in 56 years to serve as president of the Tuberculosis and Health Society of St. Louis. She is currently serving a third term in that capacity.

Who's Who of American Women lists the AMA president-elect as a "civic leader" and notes among her responsibilities: chairman of the St. Louis County Health and Hospital Advisory Board, which is appointed by the County Council; chairman of the Citizens' Committee which was successful in obtaining passage of an ordinance to fluoridate the St. Louis county water supply; member of the planning board, Health and Hospital Division, Health and Welfare Council of Metropolitan St. Louis; chairman of the Practical Nurse Educational Council; member of the Advisory Committee, Deaconess Hospital of Nursing; board member, St. Louis Unit of the American Cancer Society; board member, Mental Health Association of St. Louis; member of Advisory Council of the National Association for Mental Health.

The Sutters have three children, John, a graduate of Princeton University who will receive his master's degree in business administration from Columbia University in October; Jane, a Vassar graduate now working for a New York advertising agency, and Judy, a graduate of Bradford Junior College and Washington University.

SMA president Mrs. Jordan Kelling is also a Missourian coming from the historic village of Waverly on the bluffs of the Missouri River on the site of the old Santa Fe Trail. Her husband, known as "Dr. Jordan" to all his patients, with his brother, "Dr. Douglas," and his father, "Dr. George," have formed a medical team in their community whose combined years of service total well over a hundred years. Together they built a hospital and clinic.

A past president of the Woman's Auxiliary to the Missouri State Medical Association, Mrs. Kelling is now serving her second year as national chairman of the Disaster Preparedness Committee of the AMA Auxiliary. Mrs. Kelling is a member of the board of directors of the Missouri Girls Town Foundation. This home for girls is sponsored by the Missouri Federation of Women's Clubs. This interest has led the SMA president to take an active part on the Foster Care Committee of the Missouri Association for Social Welfare. She also served on the board of directors of the Missouri Association for Mental Health.

At the top of Mrs. Kelling's list of hobbies is reading, and she is in demand as a book reviewer.

The Kellings have one son, Captain George H. Kelling, MSC, USA, and two small grandchildren.

Dr. Walter Judd Speaks in Columbus



Dr. Walter Judd, right, U. S. congressman from Minnesota from 1942-63, addressed the Mississippi State College for Women Student Lecture Series on Doctors' Day, March 30. Mrs. H. H. McClanahan, Jr., of Columbus, left, legislative chairman, MSMA Auxiliary, presents Dr. Judd a red carnation, symbol of Doctors' Day, as Mrs. A. E. Brown of Columbus, past president of the MSMA Auxiliary, looks on. Dr. Judd, who also served as a medical missionary to China for 10 years and is an ABC TV News analyst and commentator, spoke to the MSCW audience on U. S. foreign policy, Soviet policies, and analysis of present world conditions.

Jackson Doctor Elected To Coroner's Post

Dr. Thomas M. Davis, the first licensed physician ever to offer for the office of Hinds County coroner and ranger, was elected in April 6 voting over a field of eight opponents.

Dr. Davis drew 6,603 votes of the 11,960 cast. His combined opponents polled 5,357. He succeeds E. R. Polk, who died last fall leaving an unexpired term.

U of C Dean Is Honors Day Speaker

Dr. Joseph Stokes, III, dean of medicine at the University of California, spoke at the University Medical Center Honors Day on April 30 and again that night at the Alpha Omega Alpha initiation banquet.

Three finalists in the AOA scientific prize competition read papers on their research at Honors Day, the outstanding graduating seniors received awards, and a prize was given to the junior with the highest academic average. Other students who have done noteworthy original work in the clinical departments were recognized.

The visiting speaker was jointly sponsored by AOA and the medical student body. He is a Harvard graduate, and completed his residency at Johns Hopkins.

NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

ADAMS, AUDIE MACON, Starkville. Born Starkville, Miss., Sept. 30, 1937; M.D., University of Tennessee College of Medicine, Memphis, 1963; interned Methodist Hospital, Memphis, Tenn., one year; elected March 9, 1965, by Northeast Mississippi Medical Society.

BIGGS, JACK CLAYTON, Nettleton. Born Memphis, Tenn., Jan. 13, 1927; M.D., University of Tennessee College of Medicine, Memphis, 1963; interned St. Joseph Hospital, Memphis, Tenn., one year; elected March 9, 1965, by Northeast Mississippi Medical Society.

CAMPBELL, JACK BAILEY, Jackson 8. Born Laurel, Miss., Jan. 28, 1934; M.D., University of Mississippi School of Medicine, Jackson, 1960; interned Roanoke Memorial Hospitals, Va., one year; residency, Roanoke Memorial Hospitals, Va., two years; elected March 2, 1965, by Central Medical Society.

DUMAS, ALBERT WOODS, JR., Natchez. Born Natchez, Miss., April 20, 1903; M.D., Howard University College of Medicine, Washington, D. C., 1931; interned Freedmen's Hospital, Washington, D. C., one year; elected March 16, 1965, by Homochitto Valley Medical Society.

FIELD, SAMUEL EUGENE, JR., Centreville. Born Centreville, Miss., Sept. 4, 1930; M.D., University of Mississippi School of Medicine, Jackson, 1959; interned Charity Hospital of Louisiana, New Orleans, one year; general surgery residency, Charity Hospital of Louisiana, New Orleans, four years;

general surgery fellowship, Lahey Clinic, Boston, Mass.; elected April 1, 1965, by Amite-Wilkinson Counties Medical Society.

GALLOWAY, JACKSON ROUNTREE, Natchez. Born Glenmora, La., May 2, 1930; M.D., Louisiana State University School of Medicine, New Orleans, 1955; interned Charity Hospital of Louisiana, New Orleans, one year; general surgery residency, Grady Memorial Hospital, Atlanta, Ga., one year; general surgery fellowship, Mayo Clinic, Rochester, Minn., five years; elected Jan. 28, 1965, by Homochitto Valley Medical Society.

HATTEN, KARL WINFIELD, Vicksburg. Born Hattiesburg, Miss., March 31, 1934; M.D., University of Mississippi School of Medicine, Jackson, 1959; interned University of Texas Medical Branch Hospitals, Galveston, one year; internal medicine residency, University of Mississippi School of Medicine, Jackson, two years; renal disease fellowship, University of Mississippi School of Medicine, Jackson, one year; elected Oct. 13, 1964, by West Mississippi Medical Society.

MARTIN, THOMAS STANLEY, Madison. Born Lafayette, Ala., Sept. 25, 1930; M.D., University of Mississippi School of Medicine, Jackson, 1963; interned Mississippi Baptist Hospital, Jackson, one year; elected March 2, 1965, by Central Medical Society.

MCPHERSON, FRANK TAYLOR, Vicksburg. Born Marks, Miss., July 7, 1931; M.D., Tulane University School of Medicine, New Orleans, La., 1956; interned Charity Hospital of Louisiana, New Orleans, one year; general surgery-proctology residency, Ochsner Foundation, New Orleans, La., five years; captain, U. S. Air Force, two years; elected Oct. 13, 1964, by West Mississippi Medical Society.

METCALFE, ORRICK, JR., Natchez. Born Natchez, Miss., July 12, 1928; M.D., Temple University School of Medicine, Philadelphia, Penn., 1953; interned Charity Hospital of Louisiana, New Orleans, one year; general surgery residency, Charity Hospital of Louisiana, New Orleans, four years; surgery fellowship, Lahey Clinic, Boston, Mass., one year; thoracic surgery residency, V. A. Center, Los Angeles, Calif., one year; Diplomate of the American Board of Surgery; captain U. S. Air Force, two years; elected Jan. 28, 1965, by Homochitto Valley Medical Society.

PHILPOT, VAN BUREN, JR., Houston. Born Houston, Miss., March 3, 1923; M.D., Tulane University School of Medicine, New Orleans, La., 1950; interned Methodist Hospital, Brooklyn, N. Y., one year; pathology residency, University of Wisconsin School of Medicine, Madison, three years; member, the American College of Pathology and the New York Academy of Science; captain, U. S. Army; elected March 9, 1965, by Northeast Mississippi Medical Society.

SPELL, BOBBY GENE, Jackson. Born Georgetown, Miss., May 14, 1930; M.D., University of Mississippi School of Medicine, Jackson, 1959; interned University of Texas Medical Branch Hospitals, Galveston, Tex., one year; orthopedic surgery residency, Mississippi Baptist Hospital, Jackson, two years, and at the University of Arkansas Medical Center, Little Rock, two years; elected March 2, 1965, by Central Medical Society.

STANBACK, CHARLES OLIVER, Columbus. Born Olive Branch, Miss., April 28, 1929; M.D., University of Mississippi School of Medicine, Jackson, 1963; interned Mississippi Baptist Hospital, Jackson, one year; elected March 9, 1965, by Northeast Mississippi Medical Society.

STINGILY, JAMES RAY, Hazlehurst. Born Vicksburg, Miss., Nov. 6, 1928; M.D., University of Mississippi School of Medicine, Jackson, 1961; interned Mississippi Baptist Hospital, Jackson, one year; elected Dec. 15, 1964, by South Central Mississippi Medical Society.

WADE, FRANK COLVIN, Magee. Born Marked Tree, Ark., Aug. 23, 1927; M.D., University of Mississippi School of Medicine, Jackson, 1959; interned Mississippi Baptist Hospital, Jackson, one year; elected March 2, 1965, by Central Medical Society.



"I was expecting a more thorough hearing test."

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

June 1965

Dear Doctor:

The President of AMA assailed "excessive charges" by many hospitals for services of pathology, radiology, anesthesiology, and physiatry. Testifying against Medicare bill, Dr. Donovan F. Ward lashed effort by American Hospital Association to define the four specialties as "hospital services" by inclusion under Social Security-based inpatient program.

> MSMA House of Delegates at Biloxi rejected any definition that portrays the practice of any discipline as a hospital service. Societies representing these specialties are waging hard fight to have members regarded under law as any other medical practitioner.

The special committee looking into the order to close 11 VA hospitals will report to President Johnson this week. Decision to shut down 6,000 of network's 120,000 beds brought furor from veterans organizations and prompt Congressional investigations. Special investigative body was named to act during cooling-off period.

A new and totally authentic family health book will soon be offered for sale by AMA as an at-cost public service in health education. To be titled "Today's Health Guide," the volume will have 90 chapters with 640 pages by 200 authors. Initally offered at $4.95, production and mailing cost may increase selling price.

More than 35,000 nurses are employed full time by national, state, and local public health agencies and local boards of education. New figures show school boards employ over 13,000, but public health nurses appeared to have best training with 40 per cent boasting college degrees.

Fifteen new grants for research on tobacco and health totalling $474,000 were made by the American Medical Education and Research Foundation. Projects range from one to five years in duration with expenditure of more than $3.6 million. Grant program was authorized in 1963 by AMA House of Delegates.

Sincerely,

Rowland B. Kennedy
Executive Secretary

DATELINE - MEDICAL AMERICA

'Budgie' Registration Program Controls Psittacosis

Jackson - The State Board of Health's surveillance of Budgerigar breeding and selling resulted in the state's being entirely free of psittacosis in 1964. Under law, breeders and retailers of the little birds must be registered and certified as specified by SBH regulations. Banding of birds, facilities inspection, and separation from consumer items are required. An estimated 12,500 birds are sold annually in Mississippi.

Senate Is Investigating FDA's Electronic Bugs

Washington - A Senate committee, investigating the government's use of electronic snooping equipment to invade privacy, has turned full attention to the Food and Drug Administration's use of bugs and recorders. FDA Commissioner George Larrick contended to committee that his agents made use of devices with "private rights balanced against public need." Most such use was against peddlers of illicit drugs and nostrums, he said.

Study Shows Marital And Family Patterns Of Women Physicians

Chicago - A survey of women physicians graduated from 1932 through 1954 showed that 80 per cent have married with more than half marrying medical men. Attrition is low, with all but one single woman and about two-thirds of those married still working in medicine. Of the married woman doctors, the family averaged 2.6 children, but medical wives of nonphysicians invariably had smaller families. Single women physicians tend to favor general practice and preventive medicine.

Drug Reactions Registry Is Established By AFIP

Washington - The Armed Forces Institute of Pathology, supported by AMA, the Pharmaceutical Manufacturers Association, and FDA, is organizing a Registry of Tissue Reactions to Drugs. AFIP, already possessor of world's largest repository of pathological material for research and education, will build registry of autopsy and biopsy tissue specimens from suspected drug reaction cases. Formal study reports will be furnished to pathologists sending specimens.

Upcoming AMA Convention Will Be Biggest

New York - Convention experts say that AMA's June 20-24 annual meeting will top the record with an expected attendance of 69,500, including 25,000 physicians. Record to beat is 1961 NY conclave with 64,679. Scientific program is excellent, and improved World's Fair will be a substantial drawing card.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
June 1965, Vol. VI, No. 6

ORIGINAL PAPERS

Acquired Spherocytosis Associated with Thermal Injury

R. B. THOMPSON, M.D.; L. E. EASOM, M.T.,
and WARREN N. BELL, M.D.
Jackson, Mississippi

An unusual morphological alteration in erythrocytes associated with severe thermal injury is described and the pathogenesis and prognosis discussed. Five cases are presented illustrating the features of acquired spherocytosis. It is felt by the authors that the apparent rarity of this condition can be attributed to the sparsity of laboratory data requested on burn patients.

THE TERM SPHEROCYTE denotes a cell in which the thickness is increased as is the osmotic fragility. A term "spherocytic forms" has been used by Ponder[1] to describe cells which appear spherical but do not show increased fragility. The presence of spherocytes in Wright's stained peripheral smears is of great diagnostic significance. Spherocytes stain bright red and show no central pallor; this appearance results from the excessive thickness due to their relatively spherical shape. These cells are usually smaller in diameter than normal cells and all grades of spherocytes are found.

There are actually two types of spherocytes, those found in hereditary spherocytosis (Figure 1) and those found in acquired hemolytic anemia (Figure 2). The former, although governed by a genetic factor, are not spherical at their origin but show changes commencing at the reticulocyte stage. The "acquired" spherocyte is similar morphologically to the hereditary form but represents a normal red corpuscle whose surface has been damaged. Unlike the cell of hereditary spherocytosis, which maintains a normal cell volume, acquired or secondary spherocytes have a diminished volume. Acquired spherocytes may result from the action of the majority of lysins on red cells[2] and also after the action of a number of antibodies. Antibodies which produce lysins in vitro, such as immune anti-A and anti-B[1, 2] lead to spherocytosis readily, but those that produce lysins in vivo only lead to spherocytosis sporadically.

Recently spherocytes and occasional target cells (Figure 3) were noticed in 4 consecutive peripheral smears of patients suffering severe second or third degree burns. Because of this phenomenon, the following study was instituted. The charts on all burn patients exclusive of extent at the University of Mississippi Medical Center from 1956 to the present were examined. However, to our amazement peripheral smears had not been requested or performed on but 5 of 400 charts reviewed in addition to the 4 consecutive cases mentioned above. Three of these five were minor

From the Division of Hematology, Department of Clinical Laboratory Sciences, University of Mississippi School of Medicine.

burns of first degree and of less than 10 per cent. The fourth case not described here revealed marked microcytosis, but not definite spherocytes on the day of admission. The discussion below deals with the 5 cases in which definite spherocytes were seen.

Peripheral blood smears stained with Wright's stain[3] were examined daily for the presence, absence and number of spherocytes. A cell was considered to be a spherocyte if it was small (less than 4 micra) in diameter as compared with the other cells and homogeneous and intensely stained. Osmotic fragility studies were performed where possible following procedures outlined in an earlier publication.[4]

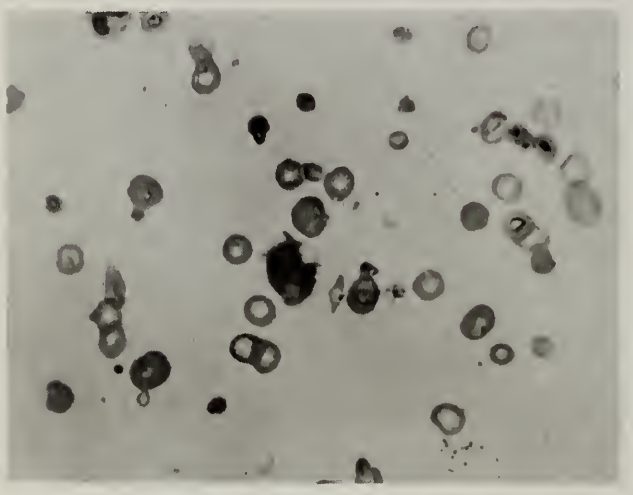


Figure 1. Peripheral blood smear from a 3-year-old white male with hereditary spherocytosis, two months postsplenectomy (Wright's stain—990×).

CASE 1

This 63-year-old white man was first seen at the University of Mississippi Medical Center on Nov. 8, 1963, for management of 60 per cent burns. At 8:00 a.m. on the morning of admission, the patient was driving on his farm with a gallon of gasoline open in the back. Accidentally, the gasoline ignited and the patient's clothes caught on fire. After being rolled on the gravel he was taken by ambulance to a local hospital where 900 cc. of plasma was administered.

On admission to the hospital, extensive second and third degree burns were present over the entire interior aspects of the face, neck, chest, abdomen, forearms, and lower extremities and extensive third degree burns over the posterior aspects of the lower extremities. The amount of the burned area was estimated at 60 per cent, 50 per cent being third degree and 10 per cent being second degree burns.

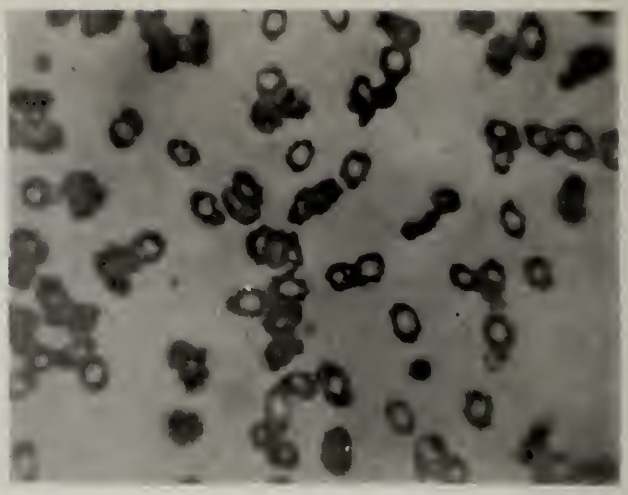


Figure 2. Peripheral blood smear from a 64-year-old white female with acquired hemolytic anemia associated with autoagglutinin. Notice occasional spherocytic microcytes (Wright's stain—990×).

Admitting laboratory data revealed a hemoglobin of 16.7 gm. per cent with a hematocrit of 50 per cent, white blood count 24,600/cmm. On peripheral smears the platelets appeared normal but a moderate number of spherocytes and target cells were noticed. The osmotic fragility test showed slight evidence of increased fragility (Table 1). The patient was started on plasma and antibiotics. Some 12 hours after admission the hemoglobin was 21.3 gm. per cent, hematocrit 63 per cent. The urinary output, although minimal during the first few hours became adequate and the patient averaged 40 to 50 cc. per hour. Nine days after admission the urinary output decreased, respiratory difficulty commenced, and

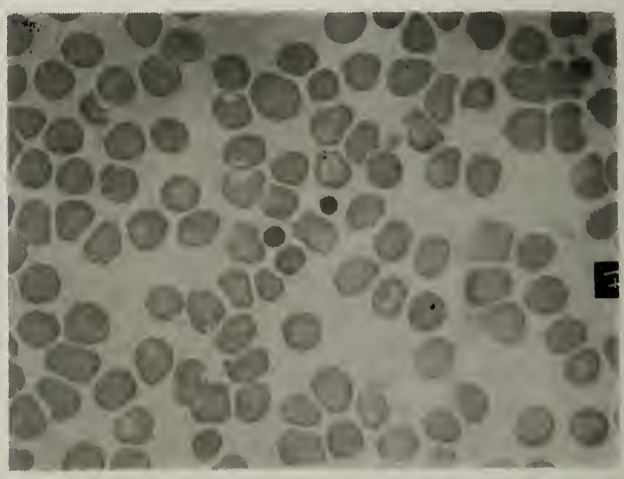


Figure 3. Peripheral blood smear on patient (Case I, II, and III) illustrating frequent spherocytes and target cells (Wright's stain—990×).

the patient expired. At this time the spherocytes were still present in the peripheral smear.

CASE II

This 87-year-old colored female was admitted to the University of Mississippi Medical Center on Dec. 3, 1963, approximately four hours after her clothes caught on fire with the sustainment of severe burns of the body. At the time of admission, the burned area was estimated at 30 per cent, 10 per cent second degree and 20 per cent third degree burns.

The admitting laboratory data revealed a hemoglobin of 13.2 gm. per cent, hematocrit 42 per cent, white blood count 18,900/cmm. Many spherocytes (3+) were seen in the peripheral smear and during her hospital course of 24 days, spherocytes ranging between 1+ and 3+ were found in the peripheral smear. The fragility of red blood cells was increased (Table 1). The patient was started on intravenous fluids, antibiotics, and whole blood. The urinary output remained good until the 17th hospital day when oliguria developed with rising BUN. The 24th day she developed pulmonary edema and expired.

TABLE 1

THE RESULTS OF THE OSMOTIC FRAGILITY TESTS ON CASES I, II, III, A CASE OF HEREDITARY SPHEROCYTOSIS AND NORMAL CONTROLS

	Per Cent Hemolysis		
	10%	*50%*	*90%*
Case I	0.56	0.50	0.47
Case II	0.58	0.52	0.48
Case III	0.49	0.44	.042
Hereditary Spherocytosis (average 2 cases)	0.71	0.61	0.57
Normals (average 10 cases)	0.50	0.46	0.42

CASE III

This 38-year-old white female was admitted to the University of Mississippi Medical Center on Dec. 12, 1963, some ten hours after sustaining severe flame burns. On admission to the hospital it was estimated that the amount of burned area was approximately 40 per cent, 5 per cent being second degree and 35 per cent being third degree. The anterior and posterior aspect of the trunk, neck and upper extremities were principally involved.

Admitting laboratory data revealed a hemoglobin of 15.2 gm. per cent, hematocrit 51 per cent, white blood count 18,700/cmm. Occasional spherocytes were seen on the peripheral smear. The osmotic fragility was within normal limits (Table 1). The patient was started on plasma and antibiotics. The urinary output over the next few days remained less than 5 cc. per hour and continued to decrease. A random urine sample shortly after admission revealed occasional red cells and a 4+ hemoglobin (Hemastix—Ames). The patient's condition steadily deteriorated, renal output approached zero, and the patient expired Dec. 26, 1963, approximately four days after admission. At the time of death, spherocytes were still present in the peripheral smear.

CASE IV

This 14-year-old white female child was admitted to the University of Mississippi Medical Center on Feb. 8, 1964, after sustaining severe burns following ignition of her clothes. On admission the percentage burned area was estimated at 62 per cent, 6 per cent second degree and 56 per cent third degree burns.

Admitting laboratory data was hemoglobin 14.8 gm. per cent, hematocrit 48 per cent, white count 31,900/cmm. Examination of peripheral smear disclosed an occasional spherocyte (1+). An osmotic fragility test was not performed. Intravenous fluids consisting of electrolytes, colloids, and 5 per cent dextrose in distilled water were started. A tracheotomy to improve aeration was done. The early urinary output remained about 25 ml. per hour. The following day hemoglobin was 17.9 gm. per cent, hematocrit 60 per cent, chloride 111 mg/liter, CO_2CP 26 mg/liter, potassium 49 mg/liter, sodium 149 mg/liter. Urinalysis revealed 3-5 blood cells/HPF with 1+ hemoglobin. The BUN rose from 12 mg. per cent to 40 mg. per cent on the second hospital day. The child was subsequently transferred to a community hospital three days after admission. At this time spherocytes were still present in the peripheral smear.

CASE V

This 36-year-old white female was admitted to the University of Mississippi Medical Center on July 21, 1956, hours after sustaining second and third degree burns of the trunk and thighs when her cigarette caught fire to the bed clothes. The extent of the burns was estimated at 20 per cent second and third degree burns. Pertinent laboratory data on admission was as follows: hemoglobin 17.0 gm. per cent, hematocrit 46 per cent,

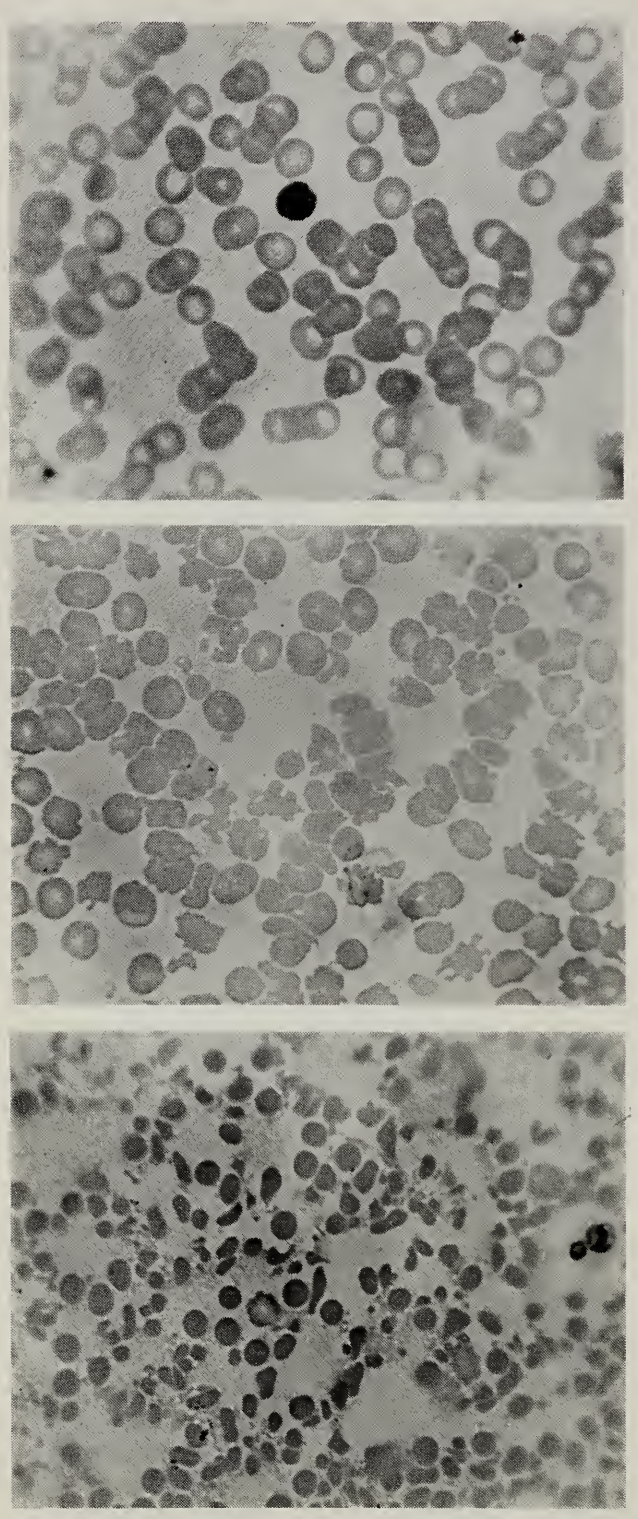


Figure 4. A. Normal blood smear prior to incubation of blood. B. Peripheral smear of blood 1 minute after incubation at 51°C. Notice distortion and pseudopodes. C. Peripheral smear of blood 2 minutes after incubation at 51°C. Notice marked poikilocytosis, anisocytosis and spherocytes (Wright's stain—990×).

W.B.C. 9,900/cmm; a rare spherocyte was seen on peripheral smear. The following day no spherocytes were seen.

DISCUSSION

Experimental studies of Shen, Ham, and Flemming[5, 6] and Pfeiffer[2] showed that with heating of human blood in vitro the following results were obtained. With defibrinated blood held at 46°C. for one hour, no changes were observed in the erythrocytes. At temperatures of 47°-50°C. abnormal changes in red cells occurred depending on the duration of heating. Within a critical zone of temperature, 51°-65°C. abnormal changes always occurred even when blood samples were heated rapidly in one and a half minutes to a given temperature and immediately cooled to 37°C.

To confirm these findings, samples of defibrinated blood were subjected to temperatures ranging from 40°-56°C. Peripheral smears of the samples were made after incubation for one minute at each temperature. No changes in red cell morphology were noted until temperature of incubation bath reached 51°C. The morphological changes are as seen in Figure 4.

These abnormal or thermal changes in the red cells occurred in a regular and reproducible manner. The first detectable alteration was formation of increasing numbers of rounded budding projections or filaments that were first connected with and finally disconnected from the erythrocytes. A progressive increase in the process of fragmentation was associated with the appearance of spherocytes, microspherocytes, and occasional ghosts. In association with the appearance of spherocytes and microspherocytes in the smear, the osmotic fragility of the red cells increased above normal and progressed to a maximum range with the progressive increase in spherocytosis of the erythrocytes.

It is probable in thermal burns that destruction of a considerable volume of erythrocytes may result directly from heating of blood at the site of the burn depending on at least three major factors: (a) the temperature obtained by the blood. (b) the duration of heating, and (c) the volume of blood subjected to these conditions. Accordingly, the thermal changes in the blood may not correlate strictly with the area burned but may be anticipated in extensive third degree burns. Thus, it is felt that the examination of blood of burned patients early may show alterations that vary only from slight spherocytosis to advanced morphological changes associated with an extreme increase

in osmotic fragility. Such findings, especially the presence of a few to occasional spherocytes, should suggest the possibility of other extrinsic cell factors, especially severe thermal burns. The persistence of these cells over a period of several days appears to carry a grave prognosis. As little has appeared in the literature since the work of Shen[5, 6] and associates, we feel that the report of these five cases is of value not only in making the physician aware of this variety of spherocytes, but also as a means of diagnosing severe burns by the laboratory and attempting to establish their prognosis.

It is felt that the apparent rarity of this morphologic alteration is more apparent than real due to the fact that few peripheral smears are requested or performed on severe second and third degree burn patients. ★★★

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THE SHOCKING TRUTH

Opening her comments during the Symposium on Parapsychology, Dr. Louisa Rhine told the story of a physician in a small country town who had a patient who had suffered three severe heart attacks. Everybody in the town knew Mr. Brown must be spared any kind of excitement or anxiety because the next attack would probably be his last. Then one day a telegram came saying that a long lost uncle had died leaving Mr. Brown one million dollars. The townspeople debated over what should be done and finally the local preacher was chosen to break the news gently to the heart patient. So the preacher went to see Mr. Brown and coming to the point after a long, involved discussion, he said, "Mr. Brown, what would you do if somebody left you a million dollars?" "Well," said Mr. Brown, thinking it over, "I'd give half of it to you for that new church you've been wanting to build." And the preacher died of a heart attack.

Leiomyosarcoma Of the Corpus Uteri

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Nineteen cases of primary leiomyosarcoma of the body of the uterus seen at the University of Mississippi Hospital over an eight and one-half year period are described. Five were dead at an average of 11 months after therapy while 11 are still alive at an average of 36 months. Prognosis is found to be good when the lesion is discovered accidentally by the pathologist, whereas it is poor when it is detected prior to operation or when extension is noted clinically or pathologically. Treatment is by total hysterectomy. Additional operative measures are not necessary, and supplementary radiotherapy or chemotherapy are of uncertain value.

LEIOMYOSARCOMA of the corpus uteri is a relatively rare disease. Therefore, its treatment is largely empirical since one physician or one institution usually has had little experience in its management. Furthermore, the chances of long-term survival are generally regarded as poor. Thus, it may be useful to determine which factors are of possible importance in prognosis so as to formulate treatment for the individual patient.

PATIENT MATERIAL

Nineteen patients with leiomyosarcoma of the corpus uteri were seen and given primary care at the University of Mississippi Hospital from July 1, 1955, through Dec. 31, 1963. During this period 158 cases of cancer of the corpus uteri of all types were diagnosed; leiomyosarcoma, therefore, accounted for 12 per cent.

CLINICAL FEATURES

The mean age of the patients was 49 years, with a range of 31 to 69. The mean parity was 6.2. This is high, but typical of the patients who attend our clinic. Only three patients were nulliparous. Symptoms were more common than might be expected, but were not necessarily due to the tumor. Fifteen patients (79 per cent) complained of irregular vaginal bleeding, six of pain, two of a pelvic mass, and one of vaginal discharge. Only one had no symptoms.

DIAGNOSIS AND TREATMENT

The diagnosis was made preoperatively by biopsy or dilatation and curettage in four cases. It was made at operation by frozen section in two cases, but in the remaining 13 cases it was made only on pathologic examination of the removed uterus.

Most of the patients in whom the diagnosis was not suspected were operated upon for leiomyomas. Thus, total hysterectomy with bilateral salpingo-oophorectomy was performed in eight cases, total hysterectomy with unilateral salpingo-oophorectomy in three cases, total hysterectomy alone in five, sub-total hysterectomy in one (because of the extent of the disease and excessive blood loss), and radical hysterectomy in one (primarily for carcinoma of the cervix). In one patient preoperative intrauterine radium had been applied, because adenocarcinoma was originally thought to be present. In one case no definitive operation was performed.

When the patient's disease was considered inoperable or recurred after primary therapy, additional treatment was given in the form of radiotherapy and/or chemotherapy. One patient received cobalt 60 teletherapy in a dosage of 3500 r to the mid-pelvis with no visible effect. Four patients received chemotherapy. In two cases nitro-

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gen mustard and in one TEM were given with no effect; in one case cyclophosphoramide was given with apparent temporary improvement for four weeks.

SURVIVAL

Five patients (26 per cent) died at an average of 11 months after definitive therapy. Fourteen patients (74 per cent) are still living at 7 to 88 months with an average survival time of 36 months. Although follow-up is necessarily incomplete, the current longevity of the survivors indicates that they have an excellent prognosis.

PROGNOSIS

Two factors appeared to be of importance—the method by which the diagnosis was made and the extension of the tumor. It can be seen from Table 1 that only two of six patients (33 per cent) survived when the diagnosis was made preoperatively (by cervical or endometrial biopsy or by dilatation and curettage), whereas 12 out of 13 (92 per cent) survived when the diagnosis was made by the pathologist after examination of the specimen. When extension was found clinically, at operation or in the pathologic specimen, all patients died, whereas if no extension was found all patients are still living (Table 2). The duration of symptoms and the pathologic grade of the tumor seemed to be of little importance.

TABLE 1
SURVIVAL AND TIME OF DIAGNOSIS

Time and Method of Diagnosis	*No. Patients* ALIVE	DEAD
Preoperatively	1	3
At Operation (frozen section)	1	1
Postoperatively (permanent section)	12	1

TABLE 2
SURVIVAL AND EXTENSION OF TUMOR

Type of Extension	*No. Patients* ALIVE	DEAD
Felt Clinically	0	1
Felt at Operation	0	3
Found in Specimen	0	1
No Extension	14	0

Thus, of five patients who had had symptoms for less than one month before the diagnosis was made, four are alive and one dead. Of nine patients who had had symptoms for one to six months, seven are alive and two dead. Of four who had had symptoms for more than six months, two are alive and two dead. In one case the duration of symptoms was not known. All five patients whose lesions were described by the pathologist as low-grade are alive. Of three patients with lesions of high-grade malignancy, two are alive and one dead. Of 11 patients in whom the grade of the lesion was not specified by the pathologist, seven are alive and four are dead.

COMMENT

It is apparent that leiomyosarcoma of the body of the uterus, if discovered accidentally by the pathologist, is not attended with a grave prognosis. If discovered earlier it is likely to be rapidly fatal. Should the diagnosis be made early, total hysterectomy with bilateral salpingo-oophorectomy is indicated and further operative procedures are likely to be of little value. If the lesion is discovered in the specimen, there would seem to be no indication for re-exploration, or removal of the ovaries, lymph nodes, or other tissue. If the lesion is found to be extensive at operation or recurs after initial treatment, neither radiotherapy nor chemotherapy is effective, at least on the basis of this small series. However, in certain instances a brief trial of radiotherapy may be given and certainly nothing would be lost by giving the patient one or more of the currently available chemotherapeutic agents. Another possible approach is to infuse the pelvis through the internal iliac arteries with a chemotherapeutic agent, which can in this manner reach a localized lesion more rapidly and in higher concentration.

SUMMARY AND CONCLUSIONS

1. Nineteen cases of leiomyosarcoma of the corpus uteri, seen and diagnosed at the University of Mississippi Hospital during an 8½ year period from July 1, 1955, through Dec. 31, 1963, have been presented.

2. If the tumor is discovered accidentally by the pathologist, the outlook for the patient is good. However if it is diagnosed prior to therapy or if extension is found clinically or pathologically, the prognosis is poor.

3. The primary treatment of leiomyosarcoma of the corpus uteri is by total hysterectomy. The addition of radical surgery, lymphadenectomy or oophorectomy, appears to have little effect upon the outcome.

4. For recurrent or extensive lesions, radiotherapy or chemotherapy may be tried, but their value is questionable. ★★★

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The Medical Aspects Of Orthopedic Trauma

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Excellent results can be obtained by many methods used in orthopedic surgery, writes the author. One method cannot be condemned or recommended over another because of its relatively infrequent or frequent use, he states. Under this premise, he discusses fractures in children, injuries in adults, dislocations, traumatic arthritis, trauma superimposed on preexisting arthritis, and disability evaluation.

THIS DISCUSSION will cover: (1) Fractures in children, (2) Injuries in adults, (3) Dislocations, (4) Traumatic arthritis, (5) Trauma superimposed on pre-existing arthritis, (6) Disability evaluation.

FRACTURES IN CHILDREN

Children's fractures seem to do well even with indifferent care. But critical summaries of fractures in children should emphasize that a child's injury is quite different from an adult's. Healing time is shorter, apposition and length are less critical. Disabilities may arise 15 years after injury.

In the majority of cases, excellent results are obtained by traction or closed reduction with plaster immobilization. There are ten basic axioms in children's fractures that can serve as a guide for good care. These have been condensed, paraphrased and stolen from Blount's book, *Fractures in Children,* published by Williams and Wilkins Company, 1955.[1]

TEN BASIC AXIOMS

1. Rotational deformities are inexcusable.
2. Angulation to 20 degrees is acceptable.
3. Bayonetting (overlapping) along bone fractures is urged in young children—infancy to age 5.
4. Epiphyseal injuries are best treated closed.
5. Excellent results are obtained by:
 a. Traction and or
 b. Closed reduction
6. Nonunion and infection are proportional to surgical intervention.
7. The indications for open reduction must be clear.
8. Greenstick fractures must be converted to complete injuries prior to plaster immobilization.
9. Passive motion after healing leads to complications.
10. Guarded active motion after removal of cast is imperative.

What injuries require surgery without the use of metallic implants?

INDICATIONS FOR OPEN REDUCTION

1. Epiphyseal displacement
 a. Attempt at closed reduction under optimal conditions
 b. Injury less than 10-12 days old
2. Major vascular injury at fracture site
3. Tendon, muscle, or soft tissue interposition
4. Open injury
5. Sixty degrees plus angulation of radial head
6. Femoral neck Type II or III
7. Medial epicondylar rotary humeral displacement
8. Lateral epicondylar rotary humeral displacement
9. Proximal displaced olecranon
10. Monteggia injury—unreducible
11. Severance of major nerve at fracture area (debatable)

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In my opinion, there are few indications for the use of metallic implants (screws, nails, rods) in closed fractures in children.

INDICATIONS FOR METALLIC FIXATION

1. Lateral displaced humeral condyle
2. Medial displaced humeral condyle
3. Femoral neck Type II and III (angle between fracture and horizontal from 0-30 degrees in Type I: 30-70 degrees in Type II: 70-90 degrees in Type III)

There are no indications for metallic implants in a child's open fracture.

It is not possible to state a blanket rule that covers all children and their injuries. A review of some typical injuries will bring us closer to acceptable methods of treatment.

FEMORAL FRACTURES

Closed reduction is the treatment of choice in femoral fractures. Open reduction, unless for specific and proven indications, is unwarranted. Fractures of the shaft are uniformly treated with traction or plaster immobilization.

In the child from infancy to 5 years of age, the fracture site in the shaft is purposely bayonetted (that is, overlapped not end to end). This will decrease overgrowth of the injured leg. When an x-ray is seen in which there is overlapping of the fragments, the phrase, "Who did that?" should be omitted. Failure to recognize this as accepted and preferred treatment may lead to difficulty not only to the child and physician but for the unwary attorney. In the child from 5 to adulthood, the femoral shaft fractures is treated in traction with or without manipulation and subsequent plaster cast.

Open surgery is necessary, however, in the displaced femoral neck, intertrochanteric region, or an unreduced distal epiphyseal injury. One must realize that avascular necrosis, the death of the femoral head, will result in 25 to 50 per cent of all cases of femoral neck fractures no matter how they are treated. This is due to the precarious blood supply around the femoral neck. In the intertrochanteric fracture, if accurate reduction can not be obtained by nonoperative measures, then a nail and plate may be necessary. This is the exception and not the rule.

TIBIAL FRACTURES

Tibial fractures are best treated by closed reduction, manipulation, and a long leg cast. When the epiphysis is involved, accurate reduction is necessary. Operative intervention in tibial fractures is the exception.

CLAVICLE FRACTURES

The clavicle can be treated by a semi-rigid immobilization. The bandage or dressing is external. Open reduction is not warranted unless the pleura lung, or subclavian artery and vein have been injured.

HUMERUS FRACTURES

Fractures of the humerus can be treated with a special bandage called a Velpeau dressing or a hanging arm cast. I remember the rage of a physician who referred a patient to the University of Virginia Hospital for treatment of a fractured humerus. We used the hanging cast which stopped at the fractured site. He felt that if we couldn't operate on it, the least we could do was to cover the thing up. Well, funny or sad—the purposes of a hanging cast are to provide downward traction and to control angulation by means of a neck-wrist strap. The Velpeau dressing is utilized when downward traction and angulation correction is not necessary. Both give highly satisfactory results.

ELBOW INJURIES

Elbow injuries in the child are difficult to treat. Complication risks are greater in this region than in most others. Limitation of motion and vascular insufficiency in spite of excellent treatment may occur. Since the fracture involves the joint. or its proximity, limitations of motion may result. Furthermore, the elbow is a relatively tight compartment. With hemorrhage, due to injury, the surrounding tissues are compressed with partial or full occlusion of the venous or arterial system. Careful observation of the radial pulse is necessary. If it is absent without capillary circulation, open surgery and inspection of the brachial artery must be done. Spasm, compression, or a ruptured vessel may prevent flow of blood to the hand.

Obviously, there are many facets to the problem of children's fractures. The possibility of growth arrest with severe or minor injury to the epiphysis exists. There are no methods to predict post-traumatic growth abnormalities when injury has occurred at the epiphysis with any degree of certainty. Any fractures around the elbow in a child may carry the complications of residual disability even though exacting treatment has taken place.

INJURIES IN ADULTS

Trauma care in the adult has vacillated in the past 30 years between closed and open methods. Strict adherence to either routine open reduction or closed therapy is erroneous. There are various ways to achieve satisfactory results. New methods are tried and must be if medicine is to progress. Some fail, some succeed. The uses of plaster, traction, and surgical techniques have at times seemed too simple. Everyone had to have a variation or modification and still does. Constant debate resulted as to when and why to use operative or nonoperative methods.

No explicit rules are given at the University of Mississippi Medical Center. When adequate fracture alignment can be obtained by nonoperative means, which include closed manipulation and plaster immobilization or traction, this is the method of choice. Injudicious use of metallic implants especially with damaged soft tissues or open wounds has and will result in non-union, infection and a false sense of security for the patient and the surgeon. When a metallic implant is used, it must be placed there by a skilled surgeon using correct gentle techniques. He must know his ability and his patient's injury. Our indications for open surgery are:

A. GENERAL INDICATIONS

1. Closed noncomminuted fractures
2. Valid attempt or attempts (2) at closed reduction
3. Available facilities and know how
4. Recognition of those injuries best treated with primary implants or closed reduction
5. Fracture with:
 a. Major blood vessel injury
 b. Major nerve laceration
 c. Tissue interposition

B. SPECIFIC INDICATIONS: UPPER EXTREMITY

1. Clavicle
 a. Pleural penetration
 b. Axillary trunk laceration
2. Humerus
 a. Irreducible fracture-dislocation, head
 b. Rotary humeral neck or avulsed tubercle
 c. Displaced or rotary condylar
 d. Distal T or Y with incongruous articulating surface
3. Ulna
 a. One inch separated olecranon
 b. Irreducible distal one third with radial drift
 c. Monteggia fracture
4. Radius
 a. Distal one third with ulnar drift
5. Radius and Ulna
 a. Shaft closed irreducible

C. SPECIFIC INDICATIONS: LOWER EXTREMITY

1. Acetabulum
 a. Irreducible large posterior or anterior lip fragment with instability
 b. Failure of closed reduction in central dislocation
2. Femur
 a. Subcapital, transcervical, or intertrochanteric
 b. Subtrochanteric
 c. Shaft
 d. Supracondylar when closed reduction fails
 e. Displaced or rotary condylar
3. Tibia
 a. Plateau depressed ⅜-½ inch
 b. Shaft-failure of nonoperative reduction
 c. Unreduced medial malleolus at joint level
4. Fibula
 a. Unreduced lateral malleolus at joint level
5. Foot
 a. Fractured-dislocation talus

The use of metallic fixation at the time of acute adult fractures is a valuable asset to the orthopedic surgeon. However, with the use of internal fixation (excluding the femur) external stability with plaster of the fracture is used. This reduces the incidence of nonunion. The surgical conversion from a closed to an open fracture does not always hasten union but may actually delay it. There are not any short cuts to fracture healing. Logical judgment in case selection for metallic implants is possible, necessary, and imperative for sound results.

DISLOCATION

A dislocation is the complete displacement of one or more bony parts which form a joint. Eighty per cent of dislocations occur in the upper extremity with 40 to 50 per cent including the shoulder. Generally, the dislocation is closed; it is rarely open. The term, fracture-dislocation, is urged to designate the presence of a fracture, large or small, accompanying the injury.

The cause of a dislocation is either an indirect or direct blow resulting in the rupture of the joint capsule, stretching of ligaments and tendons, tearing of overlying muscle, stripping of the periosteum, shredding of cartilaginous surface and deprivation of the joints' nutriment source, the synovial fluid. Arteries, veins and nerves may be ruptured, torn, bruised or stretched. Gangrene or thrombosis can result. After an adequate history and physical examination including the recording of any neurological or vascular deficit, x-rays are obtained. Early reduction is urged.

If replacement is not done, continuous damage to the articulating surface will result. The joint surfaces will no longer have their nutrient bathing synovial fluid. The blood supply to the displaced joint may be impaired. Closed reduction of traumatic dislocation produces good results. Immediate surgical intervention in the uncomplicated dislocation is rarely necessary and is needless. Obviously, physical examination after the reduction is necessary to be sure no nerve or major blood vessel has become invaginated into the joint. A postoperative x-ray is obtained for positioning. Immobilization, excluding the head of the femur (weight bearing in this joint only permitted after 2-4 months as early weight bearing may promote partial death of the head), is usually from 3 to 5 weeks. After the bandage or other immobilizing agents have been removed, the patient then begins a supervised program of active joint motion. Forced passive motion and manipulation may add to post-reduction complications. Restrictive motion or the forming of myositis ossificans can and does happen.

The above rules are not true in all dislocations. In a dislocation of the femoral head, if reduction is done 2 minutes, 2 hours, 6 hours after injury, subchondral necrosis is 40 per cent. This means a complication to the femoral head regardless of prompt reduction within 12 hours. A dislocation of the knee may not only mean the injury of the cartilaginous surfaces but that tears of the surrounding ligaments are present. If, once the reduction is obtained, there is a great deal of knee instability, surgery with repair of the damaged tissue is warranted. A delay will only compromise the end results.

In view of the above factors, a permanent disability (if you wish to use the term impairment for disability, this is satisfactory) evaluation should not be given for weeks or several months after most dislocations. Many patients with joint trauma may develop a latent complication, traumatic arthritis, subchondral necrosis, limitation of motion, pain, instability or recurrent dislocation. To estimate a disability on the objective and subjective factors involved, a temporary disability evaluation is given. It must be understood that this will represent a fluctuating estimate which may be decreased or increased when the final permanent impairment is to be rated. In estimating permanent disability in dislocations the following factors should be considered:

1. Time of recognition, diagnosis, and treatment
2. The extent and severity of the dislocation
3. Pre- and postreduction complication
4. Pre- and postreduction care
5. Evaluation of the pathological changes and objective findings in loss of function in a joint or surrounding structures
6. Accompanying fractures
7. Location of the dislocation (Was it in a nonweight bearing area—upper extremity—or in a weight bearing zone—the lower extremity?)

It is my feeling that the trauma of dislocation can be as severe as that in fractures. Furthermore, the residual disability may be greater. Care just as exacting as that given to a fracture must be carried over to the dislocation. Replacement of the displacement does not insure a perfect end result.

TRAUMATIC ARTHRITIS

The term, traumatic arthritis, has become a major heading of confusion. There is a need for clarification. Traumatic arthritis is an injury to an articulating surface that has not been previously damaged.

In arriving at an understanding of the arthritides, it is most helpful to understand the methods by which articular cartilage can be destroyed.

Wear and Tear. This is seen in the osteoarthritic whereby, through mechanical means and aging, the glistening hyaline cartilaginous membrane is worn down. As the cartilage is softened, it is susceptible to its loss of integrity in the areas of contact. Cracks and fissures result. The underlying bone is exposed with resultant pain. Any individual over the age of 45 will show some wearing of articular cartilage if we section the cartilaginous surface. Whether or not it will be asymptomatic or painful is another issue.

Cartilage cell loss. This is best seen in the rheumatoid arthritic, when the cartilaginous surface is destroyed by granulation tissues advancing from the margin of the synovium into the articulating surface. Where granulation tissue touches the articulating surfaces, cartilage is destroyed. This is quite different from wear and tear destruction.

Lysis of Cartilage. This is seen in an infected joint, whereby, a protein destroying (proteolytic)

enzyme is released. The hyaline surface (cartilage) will be dissolved totally or partially leaving fragments of cartilage. The underlying bony surface is exposed and pain results.

With the concepts of the methods by which articular cartilage can be destroyed as the ground work, we can discuss the term, traumatic arthritis. Trauma to a joint may consist of:

Severe. Severe injury results in the physical contour of the joint being damaged. With fractures extending into the joint, surface cartilage, because it is traumatized, can die. Its replacement is by fibrous tissue. Fibrous tissue does not stand the wear and tear of ambulation. Pain soon ensues.

Microtrauma. In microtrauma there is no visual evidence (x-ray) of injury. Hemarthrosis in varying degrees may result in the formation of the intra-articular adhesions. Scar tissue moving out from the periphery as in the rheumatoid arthritic can injure the articular surface. A fibrous ankylosis may be present with a marked limitation of motion.

Holm and Luck, operating on the Rhesus monkey, noted that in the nonimmobilized knee joint after surgery, there were no adhesions. The joint appeared healthy. In contrast, the knee that was immobilized in plaster after surgery, showed a heavy amount of adhesions with marked limitation of motion. At the end of the 12 week period, in the experimental animals, dense fibrous intra-articular tissue had been created. There was no doubt in the authors' mind that at the end of six weeks the animals could have broken the adhesions and would have restored knee motion.

In other words, the function of the joint was enhanced by early motion. The results of animal experiments cannot always be transferred to man. However, they infer that a certain amount of function of the joint, particularly active exercise is conducive to increasing range of motion after an injury.

It is realized that the degree of trauma may or may not be significant as far as the symptomatology of traumatic arthritis is concerned. When degeneration of cartilage takes place, the patient has pain. The onset of pain may be 6 to 18 months after injury. This is why the physician evaluating an injury to the knee may be reluctant to assign a permanent disability, until he has had an opportunity to evaluate the patient after a longer period of time.

Traumatic arthritis can occur with any joint injury. The degree of trauma may be out of proportion to the disability. One may have a central dislocation of the acetabulum, yet after healing has taken place be free of pain despite an x-ray showing a marked irregular surface. I recently saw a man who had a twisting injury to his knee who was unable to resume activity as a heavy duty worker. X-rays were within normal limits. The only findings were those of pain, described by the individual and thickening of the synovium which was palpable on physical examination. Let us not be guided solely by x-rays which show marked destruction of a knee or hip joint and assessing proportional disability. Because the patient complains of pain with little or no objective findings does not mean he is a malingerer.

Traumatic arthritis will continue to rear its ugly head in the court rooms. There is no single antidote.

PRE-EXISTING ARTHRITIS

Consider the result of trauma upon pre-existing arthritis. Is an evaluation of the physiological process of the arthritis and trauma possible? There is no doubt that trauma may aggravate a pre-existing recognized case of arthritis or may activate a dormant or undiagnosed arthritis. The obvious difficulty is in measuring the disability attributed to the injury in either case. What is perplexing to both the physician and lawyer is that a patient with pre-existing arthritis involved in a relatively trivial injury, may complain bitterly of pain out of proportion to any objective findings. This patient may be given a sizeable disability because he is emotionally disturbed or exaggerates his discomfort. I do not know of any solution to this problem other than the physician attempting to correlate all his findings at the time of disability evaluation. I do not think that a physician will disagree with me when I say that there are patients in which we treat subjective findings alone. Not all of medicine is objective nor is it an exacting science. Thus when a workman injures his back, x-rays and physical examination are termed within normal limits but pain still persists, what shall we do? Turn him away? No. Treatment is still given. This does not imply that a diagnosis is definite, but that the patient "hurts." What we are treating is pain. If the symptoms do not subside over a reasonable period of time, two to four weeks, then further searching for the source of discomfort must be made.

Obviously, it is extremely difficult, if not impossible, to base an exacting disability evaluation or diagnosis purely on subjective evaluation. There is no magic formula whereby the extent of aggravation of a pre-existing arthritis can be established. It has been clear to many physicians that

infection, fatigue, emotional upsets, and overwork will aggravate a previously mild asymptomatic arthritis. Let us not forget that in a motor vehicle accident the patient may be emotionally disturbed and this in itself can be reason for a nonstatic complaint becoming active. Some general guidelines can be given in assessing the patient as far as trauma superimposing on preexisting arthritis. These are:

A. The establishment of a pre-existing arthritis subjectively and objectively.

B. The localization of the pain involved in the joints which have just been traumatized.

C. Radiographic findings to rule out if fractures at the time of injury had extended into the joint.

D. Physical examination to rule out ligamentous or tendinous instability after trauma.

E. The objective finding of subcutaneous nodules (knots) to indicate rheumatoid disease.

F. Specific laboratory (blood) tests to give a clue to the existence of rheumatoid arthritis.

DISABILITY EVALUATION

Disability evaluation is with us to stay. A heavy responsibility falls upon any physician because of the increasing demand for his opinion in personal injury and industrial disabilities. Though demanded by compensation commissions and many lawyers, a rigid percentile evaluation must be abandoned. The examining physician should carefully weigh the importance of anatomical, physiological, and functional loss up to the point where it must be interpreted in terms of economic wage incapacity. The court then translates the physical limitation into monetary wage loss.

In the medical evaluation of disability the orthopedic surgeon is often urged to translate into percentage the functional loss which was encountered by his or someone else's patient. This appears on the surface to be a simple task but in reality, may become insurmountable.

On Feb. 15, 1958, a guide was published by the AMA to aid in the evaluation of permanent impairment of extremities and back. Let us carefully examine at random some of the disability percentiles.

On page 104 a 5 per cent impairment to the whole man is given in an individual with a nonoperative disc without residual. On the same page, a similar percentile (5 per cent) is given, to a man with a disc removed with or without residual. On page 105 a 5 per cent disability is given in a fracture of the symphysis pubis healed without residual deformity.

Obviously, if a diagnosis of a herniated disc has been made and the patient is asymptomatic, are we to give an individual 5 per cent simply because we contemplate future impairment? The rating then becomes not one of objectivity but one of guess work. Would it not be more satisfactory to say, "at the present time, this man does not have a disability but one cannot predict whether or not recurrence of his herniation will result."

I do not know of any system—any pat disability evaluation, any formula that can be applied to every patient. I do not propose to enumerate on any specific entities to serve as a guide. I can only say that the following are used by myself, in evaluation:

1. Anatomical variations, resulting from injury, that alter the patient's physiological function
2. Objective findings
3. Subjective variances
4. Consideration of his past therapy with specific emphasis on rehabilitation
5. Who was the physician that treated him? (We rarely discuss this, but often think it.)
6. Past occupation and future aspiration
7. Loss of "pleasure moments"
8. Emotional attitude toward injury (How does the patient feel?)
9. Complications from injury
10. Pre-existing physical disability.

The physician that is to lend his medical knowledge in evaluating a patient for a permanent disability must do so by regarding the whole individual, rather than the injury in a limited area. The examination must not be influenced by the size of the suit or the demands of the counselor and fellow physician. (I am most pleased to say this while not unknown, is rare.)

CONCLUSIONS

1. Excellent results can be obtained by many methods used in orthopedic surgery. One method cannot be condemned or recommended over another because of its relatively infrequent or frequent use. If it is proven by time and works so much the better.

2. The injured child presents specific problems which must be met at time of injury and throughout his growth span.

3. Adult fractures can be treated by both open and closed methods but selection of either must be made, not out of expediency for the physician, but out of care for the patient.

4. The complications of dislocations may be as severe or more severe than those seen in fractures. Reduction of the dislocation does not mean

care should stop. A careful rehabilitation program is needed.

5. The problems of traumatic arthritis still remain. There are no specific rules to predict the various degrees of severity; only with careful assessment of the patient can insight be gained.

6. Disability evaluations cannot be based on stereotyped percentages: every injury with a residual varies in subjective and objective findings.

7. Let us hold to the truism that the physician should not assume the side of the defense or plaintiff but recognize that when he is giving testimony it is factual not biased.

8. The physician should not become a lawyer in court. His main objective is to present facts and give opinions relating to his patient and not decide what the verdict should be. ★★★

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INTERNAL SECURITY

The customer walked into his favorite pharmacy. "How did you like the bath salts?" asked the druggist.

Observed the customer ruefully, "They tasted good enough, but frankly I don't think they have the same effect as a real bath."

Otitis Media Caused by Oxytetracycline Resistant Pneumococci: A Case Report

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Natchez, Mississippi

Isolation of pneumococcus strains which showed clinical and in vitro resistance to tetracyclines indicates that pneumococci may, under certain conditions such as chronic disease, as well as in rather inaccessible areas such as the middle ear cavity, become resistant after exposure to this group of antibiotics. The author reviews the literature and reports a case of acute suppurative otitis media from which an oxytetracycline-resistant pneumococcus was recovered.

THE WIDESPREAD use of antibiotics has led to the problem of the development of antibiotic-resistant strains of pathogenic bacteria. Resulting clinical problems have, for the most part, been with infections with staphylococci and with the gram negative bacilli.

Tetracyclines have been described in standard reference works as being effective against pneumococci.[1] There have been, however, several reports in the recent literature of pneumococci which became insensitive to the bacteriostatic action of tetracycline. Evans and Hansman[2] of Sydney, New South Wales, reported the isolation of a tetracycline-resistant pneumococcus from the cerebrospinal fluid of a 10-month-old infant with purulent meningitis.

Richards and Rycroft[3] of London, England, reported the isolation of Tetracycline-resistant pneumococci from the sputum of four elderly patients who had recurrent or chronic bronchitis and who had been receiving tetracyclines. Two additional cases were reported by Schaedler *et al*[4] of New York City. Tetracycline-resistant pneumococci were isolated from sputum from patients with pneumonia; the first was on tetracycline therapy, the second had received the drug intermittently for two years.

CASE REPORT

SJ., one-year-old white male, had an adenoidectomy and left tympanotomy by Dr. P. J. Bayon on Nov. 17, 1964. This was done because of recurrent exudative otitis media. Following this procedure, he was given oxytetracycline, 500 mg. per day, in four divided doses. On return to the clinic on Nov. 23, 1964, the tympanotomy was found to have healed over and the tympanic membrance was bulging and yellowish in color. A tympanic paracentesis was done, using a 16 gauge needle attached to an Alden-Senturia ear specimen collector (see Figure 1). Pus was obtained, and smear showed many gram positive diplococci. Pneumococci, optochin sensitive,[5] were grown in pure culture. Antibiotic sensitivities were checked by the disc-diffusion technique,[6] and the pneumococcus growth was not inhibited by the 30 mcg. oxytetracycline disc. There was slight inhibition of growth around the tetracycline disc, and a wide zone of inhibition around the discs containing penicillin, ampicillin, oxacillin, triacetyloleandomycin, and chloramphenicol.

He was treated with injections of procaine penicillin 1,000,000 U. daily for 5 days. On Nov. 30, 1964, the left tympanic membrane was intact, slightly mobile, but full-looking. Paracentesis was repeated, a small amount of glue-like exudate obtained, and a polyethylene tube inserted. He was then given oxacillin 250 mg. three times a day for one week. On follow-up examination on Dec. 9, 1964, there was no evidence of tympanic inflammation, and the polyethylene ventilation tube was functioning well, the eustachian tube being easily

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insufflated in retrograde fashion, using a pneumatic otoscope and listening for escape of air into the nasopharynx.

DISCUSSION

The isolation of a strain of pneumococcus which showed clinical and in vitro resistance to oxytetracycline, along with other recent reports of similar strains resistant to tetracyclines indicates that pneumococci may, under certain conditions such as chronic disease, as well as in rather inaccessible areas such as the middle ear cavity, become resistant after exposure to this group of antibiotics.



Figure 1. Instruments used in obtaining middle ear exudate for study. The straight collector (Senturia) is used with a 20 gauge clip on needle. The collector with the Luer-Lok fitting (Alden-Senturia) is used with a 16 or 17 gauge needle. The curved 11.5 cm. 16 gauge needle attached to the Luer-Lok fitting is the author's modification of a laboratory needle used for filling Wintrobe Tubes. It has a short bevel point and a curve to allow easy use through the otoscope.

The author has recovered pneumococci in pure culture from pus from the middle ear obtained by the technique described in this case from two previous cases, one who was taking oxytetracycline, the other demethlychlortetracycline. Antibiotic sensitivity tests were not done, but the recovery of viable organisms from patients receiving full therapeutic doses of antibiotics suggest that the drugs are exerting little or no bacteriostatic activity on these bacteria.

SUMMARY AND CONCLUSION

A case of acute suppurative otitis media from which an oxytetracycline-resistant pneumococcus was recovered from pus obtained by tympanic paracentesis is reported.

It seems quite possible that pneumococci which are resistant to the tetracycline group of antibiotics may be seen with increasing frequency due to the widespread use of these drugs. Penicillin, which is bactericidal for pneumococci, should remain the first choice for treating infections due to this organism. ★★★

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SOCIETY FOR TERMINAL ETERNITY

Every comedian, says funnyman Dave Madden, who wants to hit the big time should sponsor a disease. Madden says he's raising money to wipe out the greatest killer of all time—natural causes.

Clinicopathological Conference LXV

Conducted by the Department of Pathology
University of Mississippi School of Medicine
Jackson, Mississippi

CPC LXV concerns a 46-year-old white male with a chief complaint of "knots." Pertinent symptoms during the three years of his illness included "knots" in the periauricular region, supraclavicular areas, and over his anterior chest, night sweats, fever, chills, and weakness. UMC discussers are Drs. John F. Jackson, Robert D. Sloan, and Joel G. Brunson. Guest discusser is Dr. Edward Alfred Gall, director of the Department of Pathology, University of Cincinnati, immediate past president of the American Association of Pathologists and Bacteriologists, and editor of the American Journal of Pathology.

Dr. John F. Jackson: "This was the first UMC admission for this 46-year-old white male who entered with a chief complaint of 'knots.' He was admitted here on August 9, 1962 and expired on September 7, 1962. His present illness apparently began in July 1959 at which time he noted the onset of 'knots' in his neck which were sore and associated with fever. These gradually increased in size and about three months later he noticed similar 'knots' appearing in the periauricular region, supraclavicular areas, and over his anterior chest. The patient was working in the Pacific Northwest felling timber. At this time he thought that he had 'fir poisoning.' The patient consulted his private physician, a biopsy was taken, and he was told that it was not cancer. This was in December 1959.

In November of 1961, the lesions had progressed to such an extent the patient had to stop working because of pain associated with walking. He noticed a 30 lb. weight loss in five months. Also he had night sweats, fever, chills, and weakness. In January 1962 the patient was hospitalized in Redding, Calif. for approximately 17 days. A right supraclavicular node biopsy was done, and the diagnosis of reticuloendotheliosis was made. Bone marrow was normal except for 10 per cent eosinophilia. VDRL and Klein were positive. Spinal fluid revealed no cells, a protein of 25 mg. per cent, a colloidal gold curve which began with 1's and ended with 0's, and a weakly positive VDRL and Kolmer. At this time the patient was referred to the University of California Medical Center.

"Physical examination there revealed a papular rash with hyperpigmentation about the face and neck, discolored pigmented macules over the tibia, and desquamated areas over his trunk and flank which were slightly erythematous. Except for the lack of nodularity the discolored pigmented macules over the tibia would certainly fit with erythema nodosum. I rather suspect that this was the skin manifestation that this patient had at that particular time. He had 1 by 2 cm posterior and anterior cervical lymph nodes, a left preauricular node, bilateral axillary 1 x 1 cm. nodes. There were three nodules over the left anterior chest subcutaneously, which were superficial and movable, also a 1 x 1 cm. nodule over the left trapezius. The nodes were all firm, slightly rubbery, and slightly tender. There was not hepatosplenomegaly.

"Neurological examination showed a left 7th nerve weakness and bilateral hearing loss with air conduction better than bone conduction bilaterally. He had a slight generalized weakness in his triceps and biceps and tibial muscles. The patient had a somewhat slapping gait, also a moderate decrease in vibratory and position sense in both lower extremities. Thus he had dorsal column disease in the spinal cord. Here we are beginning to put together a bit of a picture for late lues with spinal cord involvement.

"Laboratory results revealed a normal blood count with the exception of 90 per cent eosinophils. Chest x-ray revealed nodular densities measuring 2½ and 1 cm. in diameter in the apical segment of the left lower lobe and the right middle lobe respectively, and some fullness of the left hilum. Bone marrow, EEG, EKG, and Coombs' test were negative. Total lipids were 900 mg. per cent which was elevated, 850 being the upper limits of normal. Uric acid, BSP, total protein, chlorides, potassium, phosphorus, alkaline phosphatase, acid phosphatase, and blood sugar were all within normal limits. Sputum and urines for acid fast bacilli were all negative on smear. LE preparations were all negative. Quantitative eosinophils were 875 per cubic mm. Platelets were normal, reticulocytes 1.1 per cent which is high normal. Smears of the lymph node biopsy for acid fast bacilli and for Hanson's bacillus were negative. Calcium and phosphorous determinations were normal on several occasions.

REVIEW OF SYSTEMS

"The patient was discharged with diagnoses of central nervous system lues, treated, and lymphadenopathy of unknown etiology. He left California, came back to Mississippi, and was admitted to the University Hospital because of persistence of symptoms. Review of systems revealed the patient had noticed that his skin had been getting darker for approximately six months, and that two years before he had had an episode of diarrhea with as many as 40 stools per day. This subsided after he had his teeth pulled. The patient also stated that he had syphilis at the age of 18 and was treated. Perhaps this is going to be helpful for us, because if you subtract 18 years from his current age of 46, then you find he was treated 28 years ago. That was certainly before the penicillin era so the chance of his having a complete cure is not as good as it would have been now. Particularly since at the age of 18, he might not be so apt to stick with the six months to two or three years that was often necessary to effect a cure for syphilis.

"Physical examination here revealed a blood pressure of 110/70, pulse of 80, respirations 12 and a temperature of 100. He had a slight bronze tinge to his skin. He still had a large right cervical node up to 3 by 3 cm. and a few shotty nodes elsewhere. Some big nodes in the left axilla and the right axilla were rubbery, movable, and nontender. The liver now was firm and enlarged 4 cm. below the costal margin and the left lobe was palpable. The spleen was not palpable at that time. He had a hemoglobin of 15 gm. per cent, an eosinophilia of 45 per cent, and BSP of 29 per cent. Bilirubin was 2.1 total, 1 mg. per cent direct. The alkaline phosphatase was 33 King-Armstrong units.

CHEMICAL EXAMINATION

"Here was a fellow who looked pretty well but by chemical examination had something wrong with his liver. His bilirubin was elevated but probably not to the extent that one could detect jaundice clinically. FBS was 175 mg. per cent. Total serum protein was 6.3 gm. per cent with 3.6 gm. albumin, 2.7 gm. globulin. The patient had a skin biopsy which showed increased pigmentation of the skin, and iron stain of the skin revealed no significant increase in iron pigment. Liver biopsy revealed a portal infiltrate containing many eosinophils accompanied by early fibrosis.

"Findings were thought to be nonspecific but were like those described in trematode infections. Lymph node biopsy of the left axilla revealed histiocytic proliferation with poorly formed granulomas. The lesion was felt to be consistent with sarcoid, but the granulomas were surprisingly poorly formed. The patient had blood cultures, sputum culture and urine cultures, all of which were negative. Febrile agglutinins were negative and here we will have to assume that special agglutinins were done for brucella though they may not be routinely done when one orders febrile agglutinins. Lumbar puncture was done, which was nonrevealing. This was a little bothersome in that I really would not have expected it to come completely back to normal in the six months' time since he had been treated.

"Skin tests were negative. Here we must presume that they did histoplasmin, coccidioidin, and blastomycin as well as tuberculin. This is helpful because he is a man who has been out on the West Coast in California. If this disease was due to coccidioidomycosis, in all likelihood one would expect the skin test to be positive. The fact that all of them were negative, actually points toward sarcoidosis, because we certainly expect the tuberculin tests to be negative in sarcoid. The serum iron was low. Apparently with the elevated fasting blood sugar, the early fibrosis on the liver biopsy, and the change in color of the skin, someone was thinking hard of hemochromatosis. But the serum iron was low rather than high, and there was not increased iron pigment in the skin. Stools and duodenal aspiration were negative for

parasites. VDRL was weakly reactive. The eosinophils gradually decreased to normal, and the ACTH test was normal.

"Multiple consultations were obtained, but the etiology of the patient's disease could not be ascertained. Because the patient developed deepening jaundice, he was empirically given prednisolone. A bilirubin on August 24, 1962 of 19.1 mg. per cent with 10.6 mg. per cent direct-acting indicated that he had a regurgitation type of jaundice and the SGOT of 2,940 pointed to acute liver cell necrosis. He was begun on treatment on August 29 and by September 12 the SGOT had come down to 300. His bilirubin was in the level of 30 mg. per cent total. Alkaline phosphatase remained elevated at 32. Total serum proteins were 5.3 gm. with 4.7 gm. albumin, and only 0.6 gm. globulin. The patient's lymph nodes disappeared, and he felt subjectively much better. However, his liver function tests did not improve. He developed a liver flap and other signs of prehepatic coma, progressively went downhill, and died. Although the protocol fails to mention that x-rays were made, Dr. Sloan tells me that there are x-rays on this case and if he will show those now, perhaps they will give me some help before we go ahead with the discussion.

X-RAY DATA

Dr. Robert D. Sloan: "He had a routine chest film shortly after admission which was reported as normal. I think that is a mistake because I think there is no question that he has hilar mediastinal adenopathy on this film. Otherwise it appears essentially normal. The pattern isn't specific. If you took 100 patients coming into this hospital with this type of adenopathy, either one of the lymphomas or sarcoid would cover most of the possibilities but there are a whole raft of other entities that can occasionally do it.

"Some of the clinical consultants, I guess, suggested various things. We had x-rays of the hands and feet looking for the changes of sarcoid but they are perfectly normal. Next there is a skull film; I suppose they were looking for a toxoplasmosis. The skull is perfectly normal. There was a film of the abdomen in order to detect enlargement of the liver and spleen. I can't really evaluate the liver but there is no question that there was moderate enlargement of the spleen at that time. Terminally there was concern about the possibility of a perforation of a hollow viscus. He must have had a fair amount of abdominal distention and some pain. An attempt was made to pass a Miller Abbott tube but it coiled in the stomach. The film shows a moderate gaseous distention of the stomach and of small and large bowel loops; as best one can tell from this film there is probably a paralytic ileus. The main positive findings are the presence of large nodes in the hilar areas and mediastinum and splenic enlargement."

DISCUSSION

Dr. Jackson: "These films have been rather helpful. Here for the first time we found that the spleen was enlarged as well as the liver. We didn't find the little punched-out lesions in the metacarpals to confirm a diagnosis of sarcoidosis. And there was rather extensive hilar adenopathy.

"First of all, let's see if we can make a couple of diagnoses before we get down into what this fellow really had that killed him. I think that with the history of syphilis at the age of 18 and the probability that it was inadequately treated, that this patient did have central nervous system syphilis with tabes dorsalis. The VDRL and others that we have here are rather nonspecific tests in that they will sometimes give false positive reactions. The TPI, however, has a very low incidence of false positives. We would like to know if this patient really had syphilis at some time. If this test were positive, then I think we could say that he did have. Sarcoidosis, lupus, and other systemic diseases can give false-positive tests, but I will say that this fellow did have syphilis. I am also going to say that he had diabetes mellitus based on one elevated blood sugar determination. This is really evading the question, because we don't think either one of these killed him.

"There is a condition of the liver that evolves in late syphilis called hepar lobatum. This is in late syphilis due to gumma formation where after the gumma subsides, there is heavy scarring leading to large areas of liver separated by bands of connective tissue. This does not involve the liver so severely as to cause hepatic coma. The terminal episode that this man went through I believe was hepatic coma. He developed the signs of hepatic failure and had an SGOT indicating catastrophic damage to his liver. He could have had some terminal episode that was unrelated to his previous illness, but I would like to put it all together if I could. This makes me look for something other than syphilis for the cause of exodus.

"How about sarcoidosis? Maybe he had 'fir poisoning' as a variant. We usually associate pine pollen, based on work indicating that pine pollen actually contains a lipid fraction that is similar to the lipid fraction in TB. It thus might be ex-

pected to cause the same type of granulomatous formation. But if one then looks at sarcoid as the cause of death, it is usually due to pulmonary fibrosis and cor pulmonale. Dr. John Chapman's recent review of sarcoidosis in *Pulmonary Disease* lists in addition as cause of death, tuberculosis, myocardial sarcoidosis with congestive heart failure, arrhythmia, renal failure with calculi and pyelonephritis, hypersplenic syndromes and unrelated diseases, without ever incriminating liver involvement as a cause of death in sarcoidosis. On the other hand, sarcoid lesions are found in about 70 per cent of patients on liver biopsy. This makes liver biopsy a very good way to make a diagnosis, but liver involvement doesn't kill people.

BIOPSIES

Maybe the second biopsy diagnosis was right with reticuloendotheliosis. Here one first of all will have to throw out the types where there is a specific pattern, and consider that perhaps this was histiocytosis X. When there are bone lesions only, it is known as eosinophilic granuloma of the bone, in children as Letterer-Siwe disease, in the occasional adult who gets it as the Hand-Schuller-Christian disease. Here again, although this can be a widespread reticuloendothelial disease, the usual way that these people die is not with liver disease. They get things like exophthalmus, otitis media, and involvement of the membranous bones of the skull all lacking in our patient.

"The lesion looked like a trematode infection. Maybe it was schistosomiasis, and cirrhosis of course can occur with this. One would have expected at some point a positive stool in this individual if he had an infestation severe enough to have caused his death from cirrhosis. Maybe instead of a trematode infection it was a nematode infection, with visceral larval migrans. Infestation with dog and cat round worm, toxocara, can cause an extreme eosinophilia with fever and hepatomegaly though usually not with this amount of lymphadenopathy. To my knowledge no one has ever died of it. Practically all the cases are young children who eat dirt and get infected with eggs, so that I will have to throw that out too. We come back then to what is malignant enough to have killed this fellow—well, cancer, of course, and lymphoma.

"He had enough node biopsies that one certainly would have expected a diagnosis of lymphoma to be established at some point along the way if that is what he had. But it is possible to have certain lymphomas, and Hodgkin's disease is one of these, in which the disease can be manifested by such a marked 'antigen-antibody type' reaction with eosinophilia that the primary diagnosis is obscured by the reticuloendothelial proliferation. I think this is what I am going to have to diagnose, especially since Dr. Gall is here to discuss this case.

"First of all, there has to have been something bad enough in the liver to kill this man. If we want to put it all under one diagnosis, we have to make it go back for a couple of years, at least, maybe for longer than that to 1959 so that he had the progression of this disease for five years. I would say then that this patient had a malignant lymphoma with atypical histiocytic proliferation that resulted in a final episode of liver involvement to the extent that he died of hepatic coma. My second choice would be some variant of sarcoidosis. But our pathologists were loath to say this was sarcoid. Also, if it were, then it is the first case of sarcoidosis that I know of in which the cause of death was hepatic involvement. I am sure that somebody will dredge such a case from the literature, however. I find that I learn more when I am listening rather than talking, so we will give Dr. Gall a chance.

DIAGNOSES

Dr. Joel G. Brunson: "It is of interest that you wound up with almost as many diagnoses as we did. It is fairly obvious that when we have as many diagnoses as this, the picture is one we don't recognize. Under such circumstances we usually call for help. It is relieving to transmit the burden to someone else. Dr. Gall has been here on several occasions. He is director of the department of pathology at the University of Cincinnati, immediate past president of the American Association of Pathologists and Bacteriologists, and editor of the *American Journal of Pathology*. We will listen intently to what you have for us."

PATHOLOGIST'S REPORT

Dr. Edward Alfred Gall: "As I listened to Dr. Jackson present his views, I wished that I had stayed up North. This case, unfortunately, reminds me of a Sunday School story which is quite in point. Teacher suggested that a volunteer might go to the blackboard, turn it about and, while the class went on with the day's lesson, draw a picture of a story from the Bible. Little Johnny went to the blackboard and remained

there for about 15 minutes while the class went on with its recitations. Teacher finally said, 'Have you finished?' and he said, 'Yes.' When the blackboard was turned around it was completely blank. Teacher was quite irate and expressed her displeasure in no uncertain terms. But Johnny maintained that it was indeed a picture from the Bible. 'What story from the Bible is it?' said Teacher. He said, 'It is the story of the Israelites crossing the Red Sea,' and she said, 'Well, where are the Israelites?' He said, 'They have already passed.' 'Where are the Pharaoh's men?' 'Well, they haven't arrived yet.' 'Well, where is the Red Sea?' 'Well, the Lord has parted the waters.' That is about where I am—equally blank.

"You may be interested in the students' diagnoses which parallel yours and ours. There were 51 students who voted for Hodgkin's disease, 8 for reticuloendotheliosis, and 17 for sarcoidosis. There were 29 who thought there was syphilis, and 17 who felt there was cirrhosis or other liver disease. To be absolutely fair about the diagnoses rendered by the surgical pathologists, I might say that the clinicians were never misled by any pathologist's diagnoses; they rarely are. Both groups at one time or another suspected the possibilities of uremia, cirrhosis, secondary syphilis, tuberculosis, fungus disease, sarcoid, lymphoma, hemochromatosis and Addison's disease. One person thought that the whole syndrome might have been related to fir tree poisoning since the patient had been exposed to the bark, pulp, and 'excretions' of these trees as a lumberman. Also suggested were chronic granulomatous liver disease of unknown etiology with hepatic coma.

"This patient came to autopsy and despite the harrowing experiences he had had, he was pretty well preserved. There was, however, jaundice. Several of the biopsy wounds remained gaping and exhibited granulating surfaces. They were not sectioned so I really don't know what was in them; I'm sure there was nonspecific infection. The peritoneum contained 3,000 cc. of clear bile-stained fluid and there was marked distention of the bowel. Even though the enlarged lymph nodes had disappeared peripherally, the retroperitoneal and mesenteric nodes were markedly enlarged, quite firm, and rather smooth and glassy on section. The lungs were unremarkable. There were no nodules in them. The liver was a little smaller than normal and rather dark green. Its surface was not nodular but it did exhibit some pitted scars and depressions. From the description these were not unlike the contracted scars encountered in hepar lobatum although I don't believe syphilis was involved in the production of the lesion here.

"The spleen was at about the barely palpable size, weighing 320 gm.; on section it showed subcapsular nodules, some gray and some red. None of the other organs showed any gross abnormality of significance. The brain was of normal weight. I cannot refute the diagnosis of tabes dorsalis; the cord was not examined.

"On section of the liver it could be seen that the scars produced the pits on the surface, but in the depth of the liver there was really nothing unusual visible beyond the prominence of the portal areas. It was quite firm but not cirrhotic. Histologically, part of the liver showed a total destruction of its architecture. The portal areas were preserved and inflamed but between them not much liver parenchyma was left. In other words, this was indicative of massive hepatic necrosis. In other areas, however, there was retention of parenchyma and, aside from congestion and focal necrosis, it was relatively undisturbed. Overall, therefore, this is an example of what might be termed submassive hepatic necrosis. The extent was certainly enough to kill him, and I believe this constituted the cause of death. In reviewing the liver biopsy, there were evidences of what might be considered smoldering hepatitis characterized by inflammation in the portal areas and focal necrosis. Whether this was of viral etiology or not, I don't know; certainly, it was not sarcoidal in nature. Incidentally, Dr. Jackson, I have indeed seen three cases of hepatic sarcoidosis terminating in cirrhosis of the liver, a sarcoid cirrhosis.

"In this case in the portal areas the interlobular ducts remained intact. There was a duct-like proliferation at the periphery of the portal area, however. Obstruction to bile outflow probably reflected destruction of peripheral lobular necrosis preventing bile from passing out of the lobules. This is what gave the liver its dark green appearance. I believe that this man had had acute hepatitis, possibly viral, which terminated in submassive necrosis.

"In addition to all this the subcapsular scars in the liver have a homogeneously hyalinized appearance. It is here that the tale of the Israelites crossing the Red Sea is in point because I have no idea what went on before. The same lesion, hower, was present also in the spleen and present to a degree in every lymph node examined. Thus, whatever attacked the liver in focal nature also attacked other organs in the body.

"On section of the spleen, the pulp itself showed a little splenitis of nonspecific nature and minor evidence of portal hypertension. Nodules noted in the gross look like hemorrhages in process of

organization. These lesions, I would say, were simply coincidental occurrences.

"The lymph node biopsy is technically poor but it shows ill-defined clusters of histiocytes in the lymphoid pulp and a scattering of eosinophils. A resemblance to sarcoid tubercles is rather remote. Actually, this is simply a marked proliferation of histiocytes. I will come back to this in a moment. At autopsy all nodes exhibited a bare remnant of the residual lymphocytic pulp. There were no Sternberg cells and there were no evidences of aggressive overgrowth; this is not a lymphoma. On the other hand, wherever the histiocytes had been in the active lesion as observed at biopsy, there was now only hyalinization. The lesion had simply undergone involution, whether spontaneously or by reason of the various therapeutic measures attempted in the patient, I don't know.

HISTOCYTIC PROLIFERATIVE DISORDERS

"May I discuss briefly the histocytic proliferative disorders? The histiocyte represents one of the most versatile cells in the body. It is not only versatile in its capacity to do various things, but it is also very versatile in terms of the names that are given to it. As a matter of fact, it has about 23 names ranging from macrophage or pyrrhol cell to resting wandering cell or dictocyte. As with its multiplicity of names so is there a wider variability in its activity. It responds to almost anything that affects the human organism. It probably is related in part to the production of immune substances. It also represents a scavenger cell without specificity. Under many circumstances of totally non-specific nature it will respond by proliferation. It is worthy of note that despite this marked proliferative capacity the architecture of the node is retained. In most instances the sinuses are simply packed with the cells. Often such sinus hyperplasia is found in the axillary dissections of individuals who have breast cancer but without metastasis. Some conclusions have been drawn in relation to resistance to the cancer; it has been claimed that patients with marked reaction of this nature have a better prognosis than those without it. Others have shown the contrary to be the case. I don't believe it has any specific connotation in respect to cancer resistance.

"In rare instances, a similar sinus histiocyte hyperplasia attains major proportions and is characterized by huge abnormal histiocytes; an unusual type of histiocytic hyperplasia, possibly an adult form of Letterer-Siwe's disease. Patients with this process frequently proceed upon a downhill course and ultimately die from what I suppose one might call an adult type of nonlipid histiocytosis. This is a histiocytic overgrowth, but it is not neoplastic. The architecture of the node, as you see, is retained. The cause of the hyperplasia as in so many reticuloendothelial disorders, is unknown. In its advanced form, the cells spill over and the same histiocytes invade the pulp in unrestrained manner. Note that they are devoid of phagocyted material, no lipid, no particles of any type. Now moving over the line entirely we have an overgrowth, aggressive in nature, without any relation to architecture. This is lymphoma, a malignant neoplasm, histiocytic lymphoma or reticulum cell sarcoma. There may thus be a range all the way from a mild reactive hyperplasia in responses to a wide variety of stimuli on into frank neoplasm, a disorder which is invariably fatal.

"On the other hand, histocytes may also respond to known materials. In the course of metabolic disorders of various types the by-products of the deranged metabolism accumulate in the tissues; these in turn provoke a histiocytic reaction which may obliterate the nodal architecture but is nonetheless nonneoplastic. This is an example of such a disease where there is interruption of lipid metabolism and phagocytes, macrophages, or whatever you wish to call them, proliferate to engulf kerasin, Gaucher's disease. Here we have a similar lesion occurring in an individual with a lipid disorder, resulting in sphingomyelin deposit. This is Niemann-Pick's disease and again the histiocytes proliferate in great abundance to engulf this abnormal product. They simply have no place to put it so they remain in the node gradually filling it entirely. This is not only the case with disordered lipid metabolism. Here we have an example of marked histiocytic hyperplasia in a child thought to have a form of lipid disorder. I think, however, you can see the crystalline deposits in the tissues. This is an example of another type of metabolic disorder, cystinosis, a failure of protein synthesis allowing the accumulation of amino acid by-products in phagocytes.

"Then, of course, there may be histiocytic reactions with rather typical tubercular arrangement. Every one of the conditions listed with question marks in the clinical diagnostic schema may produce tubercular granulomas and the causes may range all the way from tuberculosis to other bac-

terial and viral diseases, fungus disorders to the sarcoid tubercle. The lesion in each of these is indistinguishable from the other except by actual morphologic or cultural demonstration of the causative agent. These, however, are not the lesions seen in the present patient.

"In this instance the lymph nodes, as I have said, were packed with clusters of histiocytes practically filling all the node and distorting but not destroying its architecture. At higher power magnification, one can see that the marked clustering of histiocytes pushes aside the pulp cells. In another case with the same lesion the patient had hyperglobulinemia, the present patient did not. The lymph pulp cells in the other case were for the most part plasma cells, probably able to produce globulin in greater amounts than in our present case where plasma cells were not in abundance. At autopsy in this other patient who died two years later, the lesion in lymph nodes was identical with that in the present case. All of the histocytic activity had ended and there was just focal hyalinization of the areas previously affected. In the present case also, the nodes at necropsy showed only extensive focal collagenization.

NAME FOR CONDITION

"We come then to a need for a name for this condition. It would be well to be pleasing and cooperative, and there is every reason for a visitor to be so. I would agree that the best term is one which describes the histiologic nature of the disorder, reticuloendotheliosis or disseminated histiocytosis which underwent spontaneous involution and hyalinization. Terminally the patient developed an unrelated disorder, viral hepatitis, which ultimately progressed to hepatic necrosis and caused his death in hepatic failure. He may also have had syphilis although I can't spell this out morphologically."

Dr. Brunson: "Thank you, Dr. Gall. Dr. Jackson, do you have any closing comments? Other questions or comments in the audience?"

Physician: "Do you think the reticuloendotheliosis led to some change in his immunologic capacity that made him more likely to either die from the hepatitis once he got it or that it was somehow related?"

Dr. Gall: "Most individuals with these histiocytic disorders do have alteration of immune status, but I don't know that hepatitis or susceptibility to virus infection is necessarily a special indication of this. I don't recall ever seeing it as a complication. On the other hand, I don't think reticuloendotheliosis is a single disease. It is probably a group of disorders produced by different causes." ★★★

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BASKET CASE

The physician's son was explaining his poor grades to his father. "You can't beat the system, Dad. Last semester, I signed up for basketweaving. It's a snap course, and I was sure to breeze through with an 'A.' Know what happened? Two Navajos enrolled, raised the class average, and I flunked."

Radiologic Seminar XXXVIII: Emphysematous Cystitis

PAUL H. MOORE, M.D.
Pascagoula, Mississippi

EMPHYSEMATOUS CYSTITIS, as the term indicates, implies a combination of inflammation of the urinary bladder with associated gas formation. While generally regarded as a rare entity, it is being diagnosed and reported with increasing frequency. In this condition, radiographs may demonstrate the presence of the gas within the wall or lumen of the bladder, permitting a specific radiologic diagnosis.

There are three ways by which gas may occur in the urinary bladder.

1. Instrumentation.
2. Presence of fistulous connection between the bladder and the intestinal tract.
3. "Spontaneous" formation in certain infections.

The latter group is the only one being considered at this time.

Infection is an essential component in emphysematous cystitis, and the bacteria most commonly associated with the condition are *Escherichia coli* and *Aerobacter aerogenes;* however, *Proteus* species, *Staphylococcus aureus,* beta hemolytic *Streptococcus,* Friedländer's bacillus and *Norcardia* have all been found at various times. The entity is most commonly found in diabetic females, but glycosuria is not an essential prerequisite for the development of gas in the bladder. All of the factors responsible for the formation of the gas are not clearly understood, but in the glycosuria patient it is thought to be produced by the fermentation of glucose with formation of carbon dioxide.

Sponsored by the Mississippi Radiological Society.
From the Department of Radiology, Singing River Hospital.

The gaseous component of emphysematous cystitis is usually a relatively benign condition which clears with treatment of the underlying infection or diabetic condition. Clinically the disease is of importance since the fermentation of glucose leads to a false low reading on urine testing, which therefore does not accurately reflect the blood sugar levels. The pneumaturia associated with the condition may be an alarming symptom to the patient.

The radiologic appearance depends to some extent upon the location of the gas. In the usual pattern one sees a ring of small, usually confluent radiolucencies surrounding the bladder (Figure 1), or linear radiolucent streaks, when the gas bubbles lie within the mucosa or dissect along the muscular planes of the bladder wall. The gas may also be seen in the lumen of the bladder, and occasionally extends out into the pelvis soft tissue planes distal to the bladder wall (Figure 2). Gas and fecal material in the rectosigmoid may occasionally cause confusion, but the pattern is usually quite distinctive. At times excretory urography may shed light on the problem. ★★★

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Figure 1. A 44-year-old female with an E. coli urinary tract infection, with a scout film from an IVP demonstrating multiple small gas bubbles in an oval distribution in the bladder area, probably lying in the region of the mucosal lining.



Fig. 2. A 44-year-old female, a known diabetic, entered the hospital with a E. coli urinary tract infection and an elevated blood sugar. A film of the pelvis area demonstrates gas bubbles not only in the wall of the bladder, but also in the lumen of this structure and dissecting out into the soft tissue planes of the pelvis.



The President Speaking

'For a Better Physician'

EVERETT H. CRAWFORD, M.D.
Tylertown, Mississippi

THE FINANCING PATTERN of American medical education has undergone dramatic alteration in just two decades, and money problems with which the schools are beset are staggering. Just why all of this has happened is understandable when the balance sheet is reviewed: The cost of medical education in the United States has increased 1,400 per cent in 22 years. With the advent of new four years schools, a critical shortage of qualified faculty members has become apparent, especially in the preclinical curricula. And, as a sad academic fact of life, tuition fees of a medical student cover less than 6 per cent of his school's operating costs.

New and expanded programs of vital research have voracious appetites for dollars, so much so that apparently only federal funding sources can underwrite their continuation. From 1948 through 1963, the research training share of all federal funds granted to medical schools increased from 2.9 per cent to 90.0 per cent, up 3,003 per cent in 15 years. The total of funds so dedicated in this period rose from $1.6 million to $74.7 million.

These illustrations point up to the magnitude of problems of men and money with which the schools are faced, and the same problems challenge the private clinician, too. We must do much more than write a check to AMA-ERF each year, although this is of great importance. We must work to understand the demands and complexities in medical education, its changing patterns, and its pressing needs. This opportunity calls upon Mississippi physicians with reference to their own four year school. Let us offer our resources, our time, and our interest in strengthening the position of our school, of assisting its fulfilling the mission of teaching and research, and of training a better physician for tomorrow. ★★★

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EDITORIALS

The British GP: Man in a Medical Dilemma

I

THE BRITISH general practitioner is an unhappy, impecunious man who is getting ready to do something about the dilemma in which he finds himself. In 17 years under the National Health Service, he has fared rather badly. Her Majesty's Government pays him just over $3.25 per patient per year in terms of U. S. exchange for giving a panel of 2,000 all the care they require. From an average annual income of £2,425, about $6,800, he must provide his office, supplies, equipment, and assistant, if any. As a rule, the general practitioner has no access to any hospital. Whether he cares to admit it or not, he is a second class medical citizen by U. S. standards.

Last March, 700 physicians, representing England's 23,000 GP's met at the headquarters of the British Medical Association and came to a hard decision: Either the Government provides adequately for their urgent economic needs, or they resign from the National Health Service and devote themselves exclusively to private practice. It's no idle threat, either, for more than 17,200 family physicians have filed undated letters of resignation with the British Medical Guild, their professional bargaining agent. The showdown will come June 16 when the assembly is convened again. If the Government's response is deemed insufficient, the resignations will be submitted to the Minister of Health on July 1 to become effective the first day of October.

While the final chapter of the National Health Service is obviously not being written, and well may not be in this century or ever, there seems to be enough documentation to conclude with reason and logic that the NHS is something less than utopia as a health care financing and purveyal mechanism.

II

The distinguished British surgeon, Reginald S. Murley, has voiced not only his disenchantment with the scheme but his distress at its devisive impact upon the profession. Writes Mr. Murley: "It is a sad commentary on the British National Health Service that it has tended to encourage separation of the general practitioners from specialists. Indeed, it has sometimes been said that one effect of the Service has been to denigrate the family doctor and to deify the hospital and specialist."

Apart from his having no access professionally to a hospital and the humiliating gap between him and the specialist, the GP finds himself intolerably low on the economic totem pole. In the first place, his Government-paid income relates exclusively to capitation payments, while the specialist, based in a hospital, receives a salary. The latter has no overhead and may earn as much as $20,000 annually from his NHS post. He may have additional private practice in amenity or private beds set aside for this purpose.

By contrast, the family physician receives 17 shillings, 6 pence ($2.45) each per year for his first 500 patients. For the next 1,000 on his panel, he receives the basic allowance plus 11 shillings, 6 pence, a total of about $4.06. For all the remainder, he gets the initial 17/6, and he may under no circumstances have more than 3,500 assigned patients. The average assignment is 2,300 patients per general practitioner, and he must work just as hard to build this group as he would to build a private practice. Patients may, under the law, change physicians, and most Britishers have done so from time to time under NHS.

Because of economic necessity, most GP's have banded together in partnerships. Two out of three are so associated professionally, and it not only makes an occasional day off possible—a NHS doctor is on call by law 24 hours a day—but it also makes possible the hiring of a secretary to fill out endless forms, a luxury few solo practitioners could possibly afford.

III

It is admittedly difficult to compare U. S. health care services with those of a nation where most babies are born in homes and only one new hospital has been built from the ground up in nearly 20 years. This, however, is the system and not the doctors, because British practitioners are able, competent physicians by anybody's standards. Moreover, the British are a great and courageous people, howbeit they may differ from us in political philosophy. In this broad frame of reference, perhaps the best observation comes from a respected British scholar, Professor John Jewkes who occupies the Chair of Economic Organisation in the University of Oxford. As a member of the Royal Commission on the Remuneration of Doctors and Dentists, he wrote:

> "If it is true that the British people embarked upon the experiment of the National Health Service in the belief that their existing medical facilities were noticeably inferior to those found in other countries, that British medicine had failed to provide widespread service in time of sickness to the whole community and that administrative changes of themselves could produce miracles, then undoubtedly they were the victims of illusion. And, in turn, their rulers were in error if they supposed that people, left to their own devices, will never give high enough priority to medical advice and treatment and that, given this inherent defect in individual judgment, nothing short of central control can put things right."

IV

The imminent July 1 deadline will likely be the last that the British GP's are inclined to set. The previous cutoff of April 1 was postponed when a proposed contract pricing structure was referred to the Review Body on Doctors' and Dentists' Remuneration, a seven member independent committee established by the Government at the physician's request. The Review Body has the unenviable task of working out a new contract not only acceptable to the family practitioners but also to which the Government will agree.

If the endeavors are not successful, and they haven't been in two years of deliberations, then NHS must steel itself againt the strongest blow yet dealt it, the loss of 75 per cent of its 23,000 general practitioners.

The unruffled calm and tranquil patience for which John Bull is so well known may soon be subject to a harsh jostle. There is now a generation of Englishmen to whom NHS is a way of life, and it is not so much a matter of right or wrong as it is adequate or inadequate. The reckoning is made all the more difficult by the irrevocable commitment of the Wilson Government to NHS, a commitment that is only as good as the slender score of votes in Parliament holding its tenuous power posture. How, thus, can it be good that a nation's health becomes the hapless focus of an



"Here he goes on another of his research projects."

economic and political struggle for whom none can be the better?—R.B.K.

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What's Your 'Fog Index'?

Ever hear of a "fog index"? No, it's not a parlor game just making the rounds but a very serious measure for evaluating communications clarity and understandability of letters, articles for publication, and even JOURNAL editorials. Using the fog index, it is possible to come up with a score as to how well a written piece conveys the thought of the author, and it works like this: First, take any consecutive 100 words from the letter or article and perform the following arithmetic:

—Count the number of sentences or separate phrases and divide the total number into 100 to get the average number of words in the sentence.

—Count the number of words with three or more syllables, excluding proper names, combination words of simple origin, and words with "-ed" and "-es" suffixes.

—Now add the number of words with three or more syllables to the average number of words per sentence.

—Multiply the last sum by 0.4, and the product is your fog index. That figure is approximately equal to the number of years of schooling a reader will need to understand your written material, and the lower the fog index, the more easily your material is understood.

In case you want to figure it up, the fog index of this editorial is 11.6 based upon its first 100 words. Happy clear communicating!—R.B.K.

Childhood Poisonings and Adult Responsibility

Humanity's most irrepressible explorers are under five years of age, and their world of discovery includes cupboards, cabinets, kitchens, and bathrooms. But their adventures are not always happy, because more than a quarter of a million such youngsters' curiosity resulted in their being accidentally poisoned last year. More than half—51.9 per cent, to be exact—were poisoned after ingesting drugs.

A U. S. Public Health Service study of 47,000 child poisonings turned up the same old chief culprit, aspirin, which accounted for 23 per cent of the total cases. Cleaning materials were the toxic agents in 16 per cent of mishaps; pesticides, 7.2 per cent; and the remainder was about equally divided among petroleum products, turpentine, and cosmetics.

The most susceptible age bracket is that of the two year old children who made up 40 per cent of those accidentally poisoned. One year olds accounted for 28.5 per cent, 20.4 were three, 7.5 were four, and only 3.7 per cent were infants under one year of age. The Public Health Service found, also as usual, that adult carelessness and lack of awareness were most responsible for the tragic events. Projections from the study carried the gloomy forecast that as many as 300,000 childhood accidental poisonings should be expected in 1965, a sad commentary upon enlightened society.—R.B.K.



SIRS: Rather than ask for the customary appointment to horsewhip the editor, I would like to take a different tack and express my sincere approval for the editorial entitled "Discount House Labs: Pitfall for the Unwary" which appeared in the April issue. More physicians who use laboratories for confirmation of their diagnoses and as an aid in following the treatment of their patients should be acutely aware of the constantly growing problem of the "Lay Laboratories." The bad points you bring out are practically common to all the laboratories of this type. The most unfortunate aspect of this problem is that no lay laboratory could survive without extensive support from patronizing physicians.

How acute is this problem? There are very few ethical laboratories operated by physicians in the northeastern section of this country and many of the laboratories in California are now facing extinction. Our Ethical code under which we as pathologists must operate permits an unfair advantage to the "Lay Laboratory" and these organizations take advantage of the lack of restraint to actively solicit business from physicians by appealing to the doctor's pocketbook or bank bal-

ance. If too many physicians listen to the siren song from these Lay Laboratory Lorelei, they will find themselves forced to utilize only these dubious sources for questionable results.

My critique ends with two minor complaints. One is that bigness in laboratories seems to be equated with badness. My other observation is that this editorial should have been the leader and should have been printed in bold face capitals and preferably in crimson, "shouting" ink.

WILLIAM P. FEATHERSTON, M.D.
JACKSON, MISS.

SIRS: For some time now I have been meaning to write to you to say that I find your bulletin to be one of the most stimulating of the many state society publications which come to us each month. This would be true, even if you did not comment periodically on the state of radiology and is even more so because of this clear indication of wisdom.

OTHA W. LINTON
DIRECTOR OF PUBLIC RELATIONS
THE AMERICAN COLLEGE OF RADIOLOGY
CHICAGO, ILL.

NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

CAMPBELL, JACK BAILEY, Jackson. Born Laurel, Miss., Jan. 28, 1934; M.D., University of Mississippi School of Medicine, Jackson, 1960; interned Roanoke Memorial Hospitals, Va., one year; general surgery residency, Roanoke Memorial Hospitals, Va., three years; elected March 2, 1965, by Central Medical Society.

CLARK, LAURANCE JAMES, JR., Vicksburg. Born Vicksburg, Miss., Oct. 9, 1928; M.D., University of Mississippi School of Medicine, Jackson, 1960; interned Tampa General Hospital, Fla., one year; internal medicine residency, Confederate Memorial Medical Center, Shreveport, La., one year; internal medicine residency, University of Mississippi School of Medicine, Jackson, two years; elected Oct. 13, 1964, by West Mississippi Medical Society.

MAYERS, WILLIAM WINFREY, Laurel. Born Brandon, Miss., Oct. 20, 1930; M.D., University of Tennessee College of Medicine, Memphis, 1958; interned John Gaston Hospital, Memphis, Tenn., one year; general surgery residency, Kennedy V. A. Hospital, Memphis, Tenn., one year; urology residency, University of Tennessee College of Medicine and John Gaston Hospital, Memphis, three years; elected March 11, 1965, by South Mississippi Medical Society.

MCQUEEN, JAMES NORMAN, Richton. Born East Feliciana Parish, La., Oct. 5, 1937; M.D., University of Mississippi School of Medicine, Jackson, 1963; interned John Peter Smith Hospital, Ft. Worth, Tex., one year; elected April 12, 1965, by South Mississippi Medical Society.

PERSONALS

O. J. ANDY, chairman of the department of neurosurgery at the University of Mississippi School of Medicine, has been appointed to a four-year term on NIH's Neurology A Study Section. Members of the study sections meet three times a year to advise the National Advisory Councils and Committees of the Public Health Service. The sections have responsibility both to review research grant application and to survey the status of research in their fields.

S. LAMAR BAILEY opened his new clinic in Kosciusko on May 2.

R. C. BOURRET has retired as director of the Lauderdale County Health Department, a position he has held since Sept. 1, 1947.

WILLIAM G. RILEY of Meridian has announced the association of JOHN D. MCEACHIN in the Medical Arts Clinic in the practice of pediatrics.

DEATHS

ALVERSON, DONALD REMMEL, Biloxi. M.D., University of Buffalo School of Medicine, N. Y., 1927; died March 29, 1965, aged 64.

Book Reviews

Leopold's Principles and Methods of Physical Diagnosis, 3rd ed. By Henry U. Hopkins, M.D. 503 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $8.50.

This is the third edition of *Principles and Methods of Physical Diagnosis,* and the first to be revised by Doctor Hopkins following the death of Doctor Leopold who authored the first two editions.

The book is designed "to provide an introduction to the basic procedures of history taking and the performance of a physical examination," and the author has succeeded in achieving his goal. The result is a thorough presentation of the principles of history taking and of the techniques of performance of the physical examination. In addition, he has managed to include considerable pertinent material relative to diagnostic implications of both historical data and information derived from the examination. Unfortunately, in such an approach some controversial subjects must be included and these have been alluded to without consideration of alternatives. However, this is not a textbook of medicine and is not intended to be.

The book is arranged to include 23 chapters, of which one chapter is devoted to the history, a second to psychiatric survey, 20 to the physical examination and a final chapter to pediatric examination. The physical examination is divided into chapters covering the following subjects: Preliminary observations and vital signs, the skin, the head, the neck, the breasts. Examination of the thorax and its contents are divided into eight chapters discussing, respectively, sounds from the thorax, inspection of the thorax, palpation of the thorax, percussion of the thorax, auscultation of the lungs, diseases of the lung and pleura, auscultation of the heart, and diseases of the cardiovascular system. Subsequent chapters include examination of the abdomen, the male genitalia, the female genitalia, the anus and rectum, the extremities, the musculoskeletal system, and neurologic examination. The final chapter is devoted to pediatric examination, including variations in technique of eliciting the history and performance of physical examination, as indicated for examination of the pediatric patient with appropriate comments regarding diagnostic possibilities.

Although designed to supplement a specific teaching program in physical diagnosis at the University of Pennsylvania, this volume should be useful to students in any medical school. In addition, occasional review of the principles of physical diagnosis should be rewarding to any physician, regardless of his training or experience.

R. S. Spain, M.D.

Fundamentals of Orthopaedics. By John J. Gartland, A.B., M.D., Assistant Professor of Orthopaedic Surgery, Jefferson Medical College. 338 pages with 158 illustrations. Philadelphia: W. B. Saunders, 1965. $8.00.

The publication of a general work attempting to scan a medical specialty is always of interest, particularly when the book is aimed at the medical student and general practitioner. Such textbooks are certain to have a profound effect on the image cast by that specialty and on the direction to be taken in the future. A book such as this is always welcomed.

Dr. Gartland has done a fine job of distilling the practice of orthopedics in the 1960's down to a comparatively thin volume which is consistently clear and concise. He has resisted the inevitable temptation to present all sides of each problem, when doing so would serve only to confuse. In this respect he has been an articulate spokesman for his fellow orthopedists.

One cannot miss the fine balance of the book. Its 14 chapters could easily serve as an outline for a lecture course in orthopedics. Proper emphasis is given to all areas of the field; for example, rare conditions such as primary bone tumors are treated briefly, while more common conditions such as arthritis, bursitis, and tendinitis are treated at considerable length. Gartland keeps his reader in mind and is not attempting a reference work for the orthopedic resident. Low back pain comes in for a full chapter and is well presented on the assumption that common things occur commonly.

Apparently influenced by Colonna, the author has included separate chapters organized by re-

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gions of the body. The shoulder, upper extremity, lower extremity, and axial skeleton are all treated in this manner. These sections should prove especially valuable. In addition, the author wisely takes the space, in a book basically limited in scope, to lay to rest some outdated concepts that rarely are mentioned in textbooks. For example, the archiac belief that disorders of the sacroiliac joint are a frequent cause of low back pain is discussed and interred.

The last chapter of the book is titled Orthopaedic Horizons and gives us a glimpse into the future which is fascinating to consider. Dr. Gartland foresees a practical "bone glue," the prevention of osteoarthritis and the transplantation and banking of whole extremities. At the end of the book, he has included a handy glossary of the more common orthopedic terms which should be welcomed by students and house officers alike.

It may be facetious to level any criticism at a book that does so much so well, yet the addition of a few classical diagrams and x-rays would have strengthened it significantly as a teaching manual. The x-ray of a vertebral hemangioma is quite unforgettable once seen.

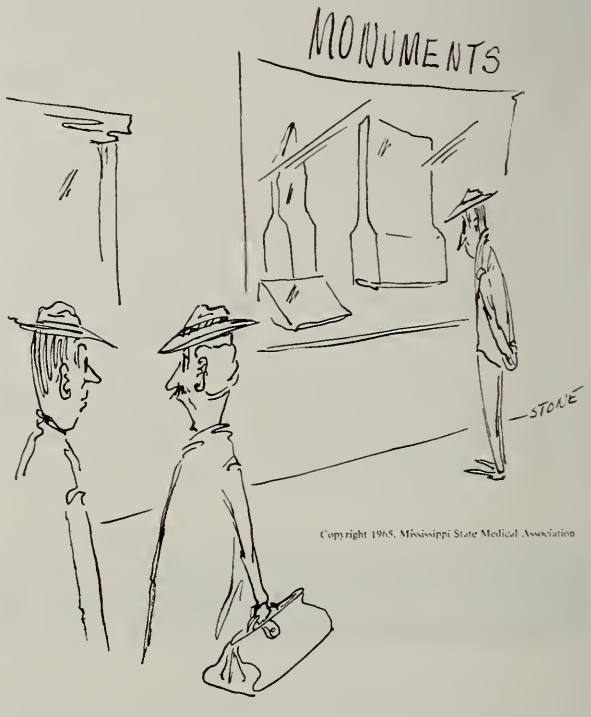
Ultimately, Gartland's book will be measured against the earlier texts of Howorth, Wiles, and Colonna, etc. It certainly covers all that can reasonably be covered at an undergraduate level and will undoubtedly be widely read.

EDWARD A. ATTIX, JR., M.D.

State Morbidity Reported Through May 7

The Mississippi State Board of Health reports the following occurrence of morbidity for 1965 through the 19th week of the year, ending May 7, 1965. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul.	546
Tuberculosis, O.F.	15
Typhoid fever	3
Encephalitis, infectious	7
Septicemia, Staph.	2
Dysentery	
Bacillary	16
Amoebic	1
Dysentery, NOS	2
Meningococcal infections	11
Diphtheria	1
Mononucleosis, infectious	21
Hepatitis, infectious	125
Tetanus	2
Helminthic infections	
Hookworm	382
Ascariasis	125
Strongyloides	17
Meningitis, O.F.	15
Histoplasmosis	2
Others Cestode Infestations	5
Salmonella Inf.	5
Gastro-enteritis	1
Streptococcus infections	
Scarlet fever	25
Strep throat	725
Pertussis	10
Measles	1,174
Chickenpox	239
Mumps	253
Influenza	5,887
Gonorrhea	1,725
Syphilis	
Early	240
Late	34



"There's one of my reactive depression patients, window shopping."

Dr. Crawford Inaugurated as President; Dr. Thompson Named President-Elect

Dr. James T. Thompson of Moss Point was named president-elect of the Mississippi State Medical Association as the 97th Annual Session closed with record attendance for a Gulf Coast meeting. Dr. Everett H. Crawford of Tylertown was inaugurated president, becoming the second physician in the association's 109 year history to follow his father in this top office. The late Dr. B. L. Crawford was inaugurated in 1944.



Dr. Everett H. Crawford of Tylertown was inaugurated president of MSMA at the close of the 97th Annual Session. He is flanked by Dr. James T. Thompson of Moss Point, left, president-elect, and Dr. Omar Simmons of Newton, outgoing president.

Dr. Omar Simmons of Newton retired from the presidency after leading the association through the 1964-65 year. New vice presidents named are Dr. John G. Egger of Drew, northern area; Dr. Arthur A. Derrick, Jr., of Durant, mid-state area; and Dr. Archie C. Hewes of Gulfport, southern area.

Re-elected to the Board of Trustees were Dr. Mal S. Riddell, Jr., of Winona, District 4; Dr. John B. Howell, Jr., of Canton, District 5; and Dr. Lamar Arrington of Meridian, District 6. As its officers for the new year, the Board named Dr. Howell to serve as chairman, Dr. Arrington as vice chairman, and Dr. C. D. Taylor, Jr., of Pass Christian, secretary.

In his annual address to the opening meeting of the House of Delegates on Monday, Dr. Simmons declared that "for better or worse, profound changes are taking place in the American system of medical care." He said that the changes are related to the distribution of care, the circumstances under which it is rendered, and the character of facilities involved in its purveyal.

Hitting at the growing role of government not merely in financing care but also as a decisive influence in quality and quantity determination, he offered a doctrine:

"The profession of medicine, in keeping with its historic traditions and commitments," Dr. Simmons said, "assures its services to all in need of medical



MSMA's newly elected vice presidents are, left to right, Drs. Archie C. Hewes of Gulfport; John G. Egger of Drew, and Arthur A. Derrick of Durant.

care. In voluntarily assuming this responsibility and giving this assurance, physicians reserve to themselves the right of property they have lawfully acquired through training and licensure."

The president said that these rights may be neither bartered nor sold and that the doctor should remain free to decide for himself the circumstances under which his professional services are rendered.

Also addressing the opening session of the House was Dr. Wesley W. Hall of Reno, Nev., vice chairman of the AMA Board of Trustees. He warned of forces hostile to American medicine, calling for a unified, dedicated profession.

During the Monday meeting, delegates heard reports from officers, the Board of Trustees, major councils, and received 11 resolutions which were introduced. Reference committee hearings were conducted Tuesday and Wednesday afternoon, before which all House reports and resolutions were considered. Final actions came on Thursday when reference committees reported and election of 1965-66 officers was held.

Delegates restated opposition to the so-called Medicare bill pending before the Senate and specifically reiterated a position against compulsory inclusion of physicians under Social Security. The specialties of pathology and radiology were reaffirmed "as the practice of medicine in all relevant senses," and the House went on to reject "any definition that would seek to portray the practice of any medical discipline as a hospital service," referring to an amendment to Medicare which would include those specialties as well as anesthesiology and physiatry as such in the legislation.

A major action came on a Board of Trustees study on medical care for the indigent under the State Hospital Commission program. Reporting that professional prerogatives of doctors appear circumscribed under the law, the Board recommended that SHC regulations be amended to permit a physician to be free to participate in the program or not, even to the refusal of a single case without having to state a reason therefor.

Both a resolution calling for adoption of a policy of nonparticipation in H.R. 6675 and all similar legislation and the report of the reference committee were tabled, and the House requested the Board of Trustees to plan for publication of a history of the association. Another resolution asking for recognition of the goals and aspirations of those in general practice to establish a certifying board was approved, as was a proposal to further the organization of teaching programs in Mississippi charity hospitals.

In other actions, the House:

—took no action on a resolution calling for membership-wide balloting on major AMA policy decisions.

—urged component societies to extend medically-sponsored nongovernmental immunization campaigns against measles.

—tabled a proposal for the association to qualify as agent for voluntary insurance aspects of H.R. 6675.

—asked physicians to recognize and appreciate hazards in employing lay laboratory services.

—referred to the Board of Trustees for study a resolution asking for exploration of the possibility that the association sponsor a separate Blue Shield plan.

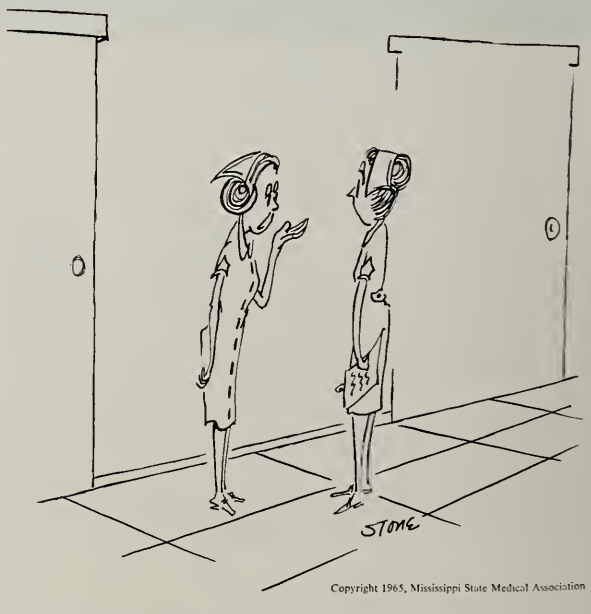
—gave approval to a new program on medical aspects of driver limitation and examination of some driver license applicants by private physicians.

—adopted a policy that all blood transfusion and blood banking services are not a sale but the rendering of a service by all participating therein.

—commended the Council on Scientific Assembly for the excellence of the program in the new general session format.

—encouraged members to support AMA-ERF and its student loan fund program.

—agreed to the chartering of a new component medical society for Clay, Lowndes, Noxubee, and



"We're having a lot of trouble with that millionaire's chart. He insists on an unlisted number."



MSMA gets a new president at the close of the 97th Annual Session. Dr. John B. Howell of Canton, left, chairman of the Board of Trustees, administers the oath to Dr. Everett H. Crawford of Tylertown as Rowland B. Kennedy, executive secretary holds the association's Bible. Center left, Dr. Wesley Hall of Reno, Nev., AMA trustee, addresses the MSMA House of Delegates. Below left, Dr. Frank H. Tucker, Jr., of Jackson accepts the 1965 Scientific Achievement award from Dr. James L. Royals. Below right, Dr. Maura Mitchell becomes the first feminine winner of the annual Robins Award. With her are left, Dr. Omar Simmons, outgoing president, and Willard J. Duvall of New Orleans, district manager, A. H. Robins Company.









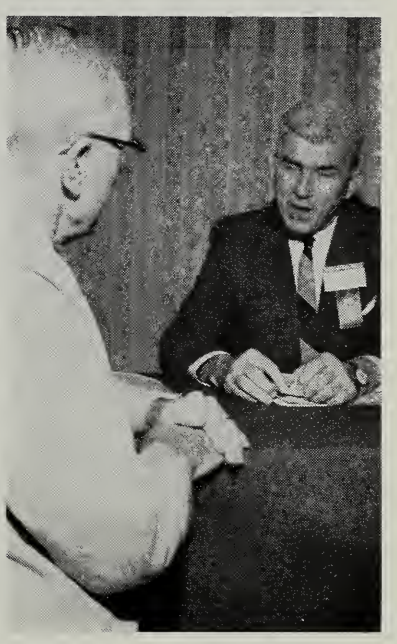
Dr. Howard A. Nelson of Greenwood explains the WLOX-TV camera to Dr. George F. Archer of Greenville, Dr. Maria J. Mangold of Yazoo City, and Dr. B. Marden Black of Rochester, Minn. The group appeared on the station's "Just Coasting" program on May 11. "And when the red light comes on . . . ," explains Betty Dees of the "Just Coasting" program to her May 10 guests, Mrs. T. J. Safley, Dr. C. D. Taylor, and Dr. James L. Royals. Below left, Mrs. Safley, outgoing president, checks over Auxiliary activities with Mrs. J. Gordon Dees, president-elect, and Mrs. J. Hurd Gaddy, incoming president. Below right, Dr. Denton A. Cooley left, and Dr. Don W. Chapman, right, look over the scientific exhibits with Dr. Hector Howard of Memphis, a former student of Dr. Cooley's.















On May 12, state physicians looked into the current happenings in the field of parapsychology. Drs. J. B. and Louisa Rhine listen, above left, as Dr. James L. Royals opens the Symposium on Parapsychology. After the formal program, many members of the audience had experiences to share with the world known Duke University investigators. Dr. J. B. talks with an interested physician, center right, and at the center left, Dr. Louisa listens to a young woman's story. Below right, the Drs. Rhine admire the Buena Vista's tree.



Two special groups held their yearly get-togethers during the 97th Annual Session. Above, members of the MSMA Fifty Year Club meet for lunch and to talk over old times. Below right, 18 association past presidents gather for a breakfast session with Dr. John G. Archer of Greenville, 1963-64 president, as their host. At the center right, Dr. Archer welcomes Dr. Omar Simmons of Newton, 1964-65 president, into the membership as Dr. B. B. O'Mara, 1949-1950, and Dr. E. Leroy Wilkins of Clarksdale, 1943-44, look on.





Oktibbeha counties, all now part of the Northeast Mississippi Medical Society, the new body to be designated the Prairie Medical Society.

—received a proposal to amend the By-Laws to discontinue scientific membership as the degree now exists, the pending amendment to lie on the table for a year.

Others named to elected posts by the House on Thursday included Dr. Thomas W. Wesson of Tupelo, associate editor of the JOURNAL; Dr. J. P. Culpepper, Jr., of Hattiesburg, re-elected AMA delegate; and Dr. B. B. O'Mara of Biloxi, re-named alternate delegate to AMA.

Physicians named to councils were Dr. J. T. Davis of Corinth, Budget and Finance; Dr. William O. Barnett of Jackson, Medical Education; Dr. Raymond S. Martin of Jackson, Constitution and By-Laws; and Drs. John G. Egger of Drew, James O. Gilmore of Oxford, and Frank M. Davis of Corinth to the Council on Legislation.

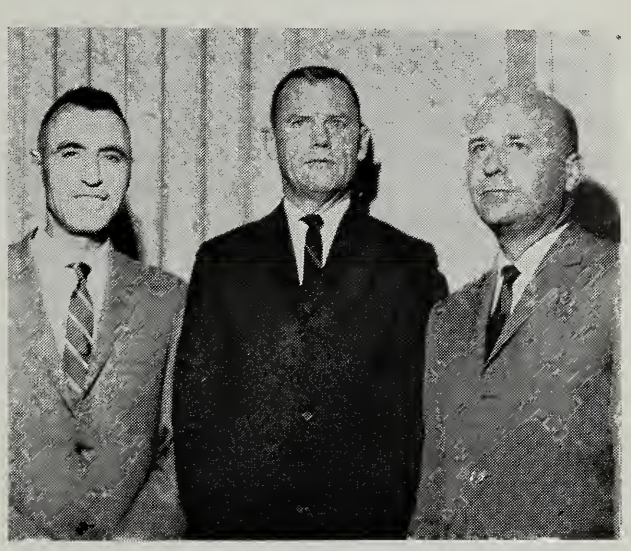
Named to terms on the Judicial Council were Drs. E. LeRoy Wilkins of Clarksdale, R. L. Wyatt of Holly Springs, and T. N. Braddock of West Point. Drs. Paul B. Brumby of Lexington, John G. Caden, Jr., of Jackson, and Guy T. Vise of Meridian were elected to the Council on Medical Service.

Nominees for the State Board of Health were: for District 6, Drs. Joseph G. McKinnon of Hattiesburg, Earl W. Green of Hattiesburg, and James P. Wood of Waynesboro; for District 7, Drs. S. E. Field, Sr., of Centreville, Jim C. Barnett, Jr., of Brookhaven, and Leo J. Scanlon, Jr., of Natchez; for District 8, Drs. Harvey F. Garrison, Jr., H. C. Ricks, Sr., and James Grant Thompson, all of Jackson.

Selected as nominees to succeed themselves as members of the Board of Directors, Mississippi Hospital and Medical Service, were Drs. M. Q. Ewing of Amory, Joseph B. Rogers of Oxford, S. Lamar Bailey of Kosciusko, and James Grant Thompson of Jackson. Fraternal delegates will be Dr. George S. Barnes of Columbus, to Alabama; Dr. Patrick R. Hunter of Greenville, to Arkansas; Dr. Victor E. Landry of Lucedale, to Louisiana; and Dr. Stanley A. Hill of Corinth, to Tennessee.

Presiding over the meetings of the House of Delegates were Dr. Howard A. Nelson of Greenwood, speaker, and Dr. William E. Lotterhos of Jackson, vice speaker. Dr. James L. Royals of Jackson is chairman of the Council on Scientific Assembly, which planned the 97th Annual Session. Total registration hit a new high of 1,002 for a Biloxi meeting.

Dr. Brunson Heads Pathologists



Dr. Joel Brunson, center, was named president of the Mississippi Association of Pathologists during the group's May 10 meeting in Biloxi. Dr. Robert Gatling, right, is president-elect. Dr. Louis Schiesari, left, is the outgoing president. All are from Jackson.

MSMA Members Hear Parapsychology Symposium

Turning from the study of physical ills, state physicians attending MSMA's 97th Annual Session of the Mississippi State Medical Association spent Wednesday morning, May 12, looking into parapsychology.

Conducting the Symposium on Parapsychology were Dr. J. B. Rhine and Dr. Louisa Rhine of Duke University, world known authorities. According to the definitions of the Drs. Rhine, parapsychology is the communication between a person and his environment without the use of the central nervous system. It includes such phenomena as clairvoyance, extrasensory perception of an objective situation; telepathy, transfer of thought from one person to another; precognition, extrasensory perception of future events, and psychokinesis or PK, the direct action of mind over matter.

The Rhines were students at the University of Chicago when they first became interested in the unexplored field of parapsychology. One day a professor in their department related an instance of seeing a dream come true to every detail. "I thought this was much more important than the botany he was teaching," related Dr. Rhine, "so

we changed from the study of botany to psychology—the closest jumping off place."

Comparing parapsychology to a rare and unknown disease, Dr. Rhine said, "We can diagnose it and recognize it, but it'll be a long time before we know the etiology and we're far away from therapy or control."

Beginning his discussion, Dr. Rhine told the physicians and their guests, "The kind of thing we're going to concentrate on is in the categories of religion or superstition." He noted that parapsychology is a subject of controversy, but said, "Remember all other sciences were derived from occurrences in nature which at one time were equally mysterious."

"All of your practice," he said, "derives from miraculous things such as birth and death. From these once mysterious happenings comes the basis of the biological sciences."

He pointed out that following each new field of scientific knowledge it was felt that "these remaining mysteries must be supernatural." Emphasizing the importance of the study of parapsychology, he said, "We still haven't got control over man's own nature.

"If people have such ability," he said, "they just have to be a different kind of people than they have been thought to be. It makes man rather magnificent."

Dr. Rhine postulated that "everybody has this potential at birth, but very few persons can effectually demonstrate it. By understanding this phenomena, we can bring it under control."

He said that environment and culture and intelligence level had little to do with the native ability but a great deal of influence on "how a person will look at it and what he'll do with it."

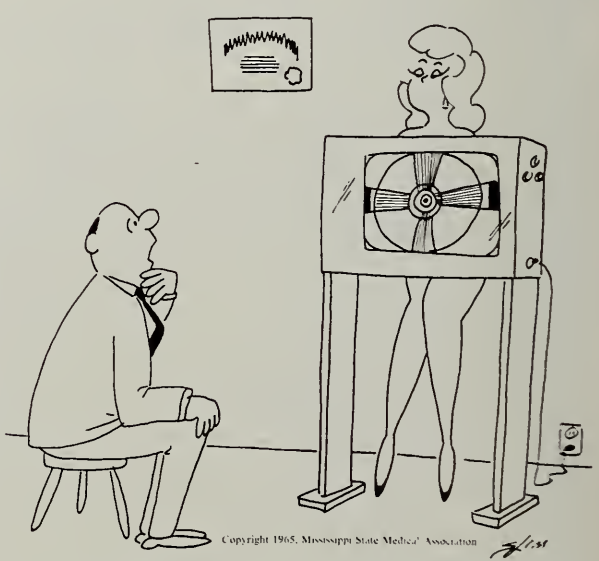
He explained that these phenomena work on the unconscious level and "since a subject doesn't know how he is doing it, we can't put him on a stage for demonstration. He doesn't know on what day he'll do well or poorly."

Dr. Louisa Rhine drew from her collection of over 10,000 cases to illustrate the various forms of extrasensory perception. They all fall under the categories of clairvoyance, telepathy, precognition, or psychokinesis, she explained. In addition, she said, the phenomena come as intuition, hallucinations, or as one of two types of dreams. The first type of dream, she elaborated, is the unrealistic variety which "tells the truth but not the realistic truth." She illustrated this point with a letter from a young woman describing how she had dreamed a brother had fatally stabbed her mother. The next day she received notice that her mother had indeed died—but from pneumonia.

The other type of dream, continued Dr. Louisa Rhine, is the realistic dream. She pointed out that the same young woman had earlier dreamed of a room in complete detail although it was a place she had never been. Later, on beginning studies at a strange school, she found the dining room to be exactly as the one in her dream.

This is not at all unusual, Dr. Rhine said. Many persons have had this experience of "remembering the future" both in terms of places and in terms of actual events, she added. Dr. Rhine told of an English minister who, on being given a general anesthetic, visualized a thick yellow cloud with a hole in it. Through that hole he saw a man and a woman smiling. The woman said, "It's all over." When he recovered, he constantly thought of this scene and often dreamed it over and over, though he had never seen either of the two persons. Twenty years later he underwent another operation, and in going under the general anesthetic saw once again the thick, yellow cloud with a hole in it. This time, however, he went through the hole and woke up and there were the woman and man of his dream bending over him and the woman was saying, "It's all over." "I know," said the minister, "that's what you said 20 years ago."

In answer to questions from the audience, the Drs. Rhine explained that parapsychological phenomena appear to have no relationship to time or distance. He noted that subjects have been able to predict the order of cards to a percentage far better than chance as much as a year ahead and 4,000 miles away.



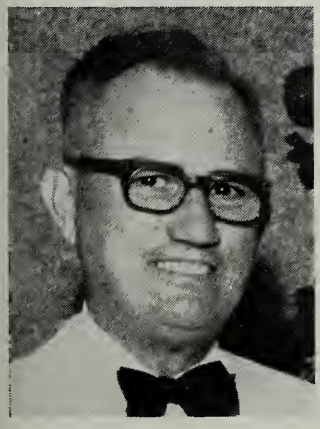
"You'd better cut out the TV dinners."

"If one person can show the ability to call one after another cards, and even predict the order and do it regardless of space or time, it appears there is a side of man that the people who are making computers haven't even dreamed of. These extentions of man's perceptive abilities would give him a great deal more power," he said in an interview prior to the symposium.

Dr. Crawford Heads MSMA

Dr. Everett H. Crawford of Tylertown followed in his father's footsteps as he was inaugurated president of the Mississippi State Medical Association at the close of MSMA's 97th Annual Session.

Dr. B. L. Crawford of Tylertown served as president of the state medical association in the terms 1944-45 and 1945-46, the only man to serve two terms because there was no meeting during the war years.



Dr. Crawford

Dr. Everett Crawford, who succeeded Dr. Omar Simmons of Newton, is a long-time leader in medical organization. He has served on the MSMA Board of Trustees for five years and on the Council on Medical Service for eight years. He had also served as president of the South Central Mississippi Medical Society.

This is the second time in the association's 109 year history that both father and son have held MSMA's highest general office. Dr. Stanley A. Hill was president during the term 1959-1960 following his father, who served 1935-1936.

Top Awards Given Ellisville, Jackson Doctors

Presentation of two awards highlighted the May 13 meeting of MSMA's House of Delegates. Dr. Maura J. Mitchell of Ellisville received the fourth annual Robins Award, the first woman to be so honored, and Drs. Frank H. Tucker, Jr., W. O. Barnett, and Ben Hilbun, all of Jackson, were presented the scientific achievement award. The winning scientific exhibit was entitled "Gastro-intestinal Effect of Vagotomy."

Dr. Mitchell received the Robins plaque for her outstanding service to her community. A native of Cuba, Dr. Mitchell came to Ellisville with her husband, Dr. Shelby W. Mitchell, whom she met while he was stationed at the San Julian Naval Base during World War II. Through her skills as a physician, Dr. Mitchell has made a continuing contribution to her community and society, performing tuberculin tests for 1,200 inmates at the Ellisville State School, screening for cervical cancer among members of the Federated Women's Clubs, and acting as team physician for the track, basketball, and football teams of the Ellisville schools.

She has lectured extensively against communism from the rich background of her Cuban life and the coming of the Castro regime to her native Cuba. She is active in the Baptist Church and has been named to "Who's Who in American Women."

In its nomination of Dr. Mitchell, the South Mississippi Medical Society said, "Few people have touched the lives of so many—as has she—in such a short time."

Other Robins award winners are Dr. Thomas G. Ross, Jackson, 1962; Dr. Frank M. Davis, Corinth, 1963, and Dr. Howard A. Nelson, Greenwood, 1964. The award is given by MSMA in cooperation with the A. H. Robins Company of Richmond, Va.

Dr. Howard Speaks At UMC Commencement

Dr. Robert B. Howard, dean of the University of Minnesota College of Medical Sciences, was the speaker for the Commencement of the University of Mississippi at the Medical Center on May 30.

Fifty-eight seniors got their M.D. degrees. Also participating in the ceremony were 24 candidates for bachelor of science degrees in nursing and nine for advanced degrees in the health sciences.

The graduation was held in the First Baptist Church at 4 p.m. Other events on the all-day Commencement calendar were a breakfast given for graduates and their families by the alumni, baccalaureate service at Capitol Street Methodist Church, and the chancellor's reception for all of those participating and their relatives.

Sections Study Genetics Thyrotoxicosis, Immunity

Genetics, the heart during pregnancy, thyrotoxicosis, and immunity in infancy were among the many subjects discussed in the scientific section meetings during the 97th Annual Session.

For its program, the Section on Surgery conducted a Seminar on Thyrotoxicosis which featured four out-of-state essayists. Discussing medical and surgical therapy, Dr. B. Marden Black of Rochester, Minn., said, "Tremendous strides have been made in the treatment of thyrotoxicosis. This used to be a rather dangerous undertaking, now it is a safe proposition."



Dr. Barnes

Dr. Blake, who is professor, department of surgery, Mayo Graduate School of Medicine, University of Minnesota, explained that there were three methods available for treatment of this disease condition. He said these included anti-thyroid drugs, radioactive iodine, and removing the thyroid gland.

"Radioactive iodine is the treatment of choice except in children," Dr. Black said. Continuing, he said, "We feared at first that cancer of the thyroid might develop after the use of radioactive iodine, but after 19 years, we are convinced it is safe."



Dr. Hamrick

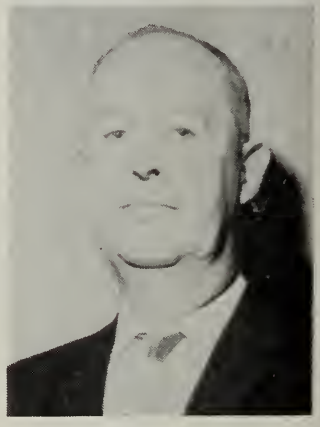
On the same panel, Dr. Douglas L. Gordon of Baton Rouge, La., discussed the diagnosis of thyrotoxicosis. He told the physicians that "the diagnosis should be made on clinical ground and in most instances, a very positive diagnosis can be made in this manner. I believe that despite the correctness of the diagnosis, it should always be substantiated by laboratory procedure. More than one test should be performed since there are many areas of error involved in a single procedure." Dr. Gordon is clinical associate professor, department of medicine, LSU School of Medicine. Other speakers on the panel included two Tulane University professors, Dr. Edward T. Krementz of the department of surgery and Dr. Paul J. Murison of the department of medicine.



Dr. Atkinson

Two Baylor University professors addressed the Tuesday afternoon Section on Obstetrics and Gynecology. Dr. Denton Cooley reported experience with open heart surgery in pregnant women and presented new techniques designed to reduce the risk of such procedures.

Dr. Don W. Chapman spoke on cardiac physiology during pregnancy. He told the physicians that from the third or fourth month through the eighth month a pregnant woman's heart increases in output from 30-50 per cent. This has a tendency to overload the abnormal heart, he said. A little over 80 per cent of the heart disease encountered during pregnancy is due to rheumatic heart and 15 per cent is due to congenital heart defects, he continued.



Dr. Gillespie

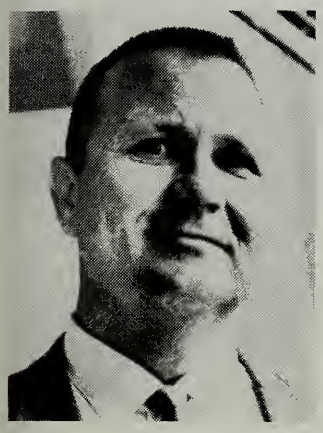
During the Tuesday morning Section on Internal Medicine, Dr. John Jackson of Jackson spoke on Genetic Principles in Medical Practice. "The principles of Mendelian genetics are directly applicable to inherited human diseases," he said.

"Knowledge of the mechanics of inheritance can be helpful to the practicing physician in arriving at a diagnosis in individual problems based on family history," he elaborated. "Such information becomes a necessity in genetic counseling to provide a basis for the prediction of the expected

incidence of inherited disease in future offspring," he concluded.

During the Section on Pediatrics meeting, Dr. Blair Batson talked on immunity and immunization in infancy. He said the question of whether to continue widespread vaccination for smallpox, now that a powerful new drug has been found that is effective in treating the disease, is one that will be seriously discussed and argued for the next five to ten years.

It is a question of whether the vaccinations are protecting or harming, said Dr. Batson, who pointed to the high mortality and morbidity rates experienced through the use of vaccine. Dr. Batson said the new drug that has been used successfully on smallpox victims is a powerful emetic, is not new, and is plentiful and cheap. Dr. Batson is chairman of the department on pediatrics, University of Mississippi School of Medicine.



Dr. Thornton

Physicians attending the Section on Preventive Medicine heard discussions on heart disease control, tuberculosis control, and population control. Subjects under consideration at the Section on EENT meeting were Bekesy audiometry in otologic diagnosis, Bowen's disease of the cornea, and facial paralysis. The Section on General Practice considered low back and lower extremity pain, neurological and surgical procedures for relief of pain, intensive care of the acute myocardial infarct, and subdural hematoma.

New section officers include: Surgery—Dr. Jack A. Atkinson, Brookhaven, chairman; Dr. George Gillespie, Jackson, secretary; Internal Medicine—Dr. George S. Barnes, Columbus, chairman; Dr. William E. Weems, Laurel, secretary; Obstetrics and Gynecology—Dr. Daniel R. Thornton, Jr., Meridian, chairman; Dr. Chester Lake, Jackson, secretary; Preventive Medicine—Dr. J. T. Hamrick, Jackson, chairman; Dr. Alton Cobb, Jackson, secretary; General Practice—Dr. Max Berman, Jackson, chairman; Dr. W. M. Dabney, Crystal Springs, secretary; Eye, Ear, Nose, and Throat—Dr. Samuel G. Mounger, Greenwood, chairman; Dr. Emmett M. Herring, Hattiesburg, secretary.

ICS Officials Check Bulletin Board



Two officials of the International College of Surgeons check over the MSMA bulletin board at the 97th Annual Session. Mississippi members of the college met for a luncheon meeting on May 11. At the right is Dr. Lawrence W. Long of Jackson, state regent for ICS and vice president and member of the executive council of the United States Section. Stanley Henwood, left, ICS executive director, was a guest of the Mississippi Chapter.

AHA Session Set for October

Six programs on clinical cardiology and simultaneous sessions on specialized cardiovascular subjects have been planned for the American Heart Association's 38th annual Scientific Sessions, to be held Oct. 15-17, 1965, at the Hotel Americana, Bal Harbour, Fla.

The Clinical Sessions, consisting of panels, symposia, lectures and papers reporting clinical investigations, are designed as a postgraduate course in cardiology. They are of particular interest to the practicing physician.

Concurrent sessions devoted to the presentation of papers on original work in various cardiovascular subspecialties are of special interest to physicians and basic scientists working in these areas.

Friday morning's opening General Session will hear the Lewis A. Conner Memorial Lecture by Dr. Julius H. Comroe, Jr., professor of physiology and director of the Cardiovascular Research Institute, University of California Medical Center,

San Francisco. The Association's annual Research Achievement Award will also be presented at this session.

Saturday's program includes an all-day session on Stroke which will emphasize the presentation of original investigative work in the cerebrovascular field. The George E. Brown Memorial Lecture, on "Inter-Arterial Shunts in the Cerebral Circulation," will be presented at this session by Dr. James F. Toole, Chairman of the Department of Neurology, Bowman-Gray School of Medicine of Wake Forest College, Winston-Salem, N. C.

As in the past, Cardiovascular Conferences will be held Saturday evening for small and informal group discussions on a broad range of subjects.

Sunday's program includes the showing of cardiovascular films throughout the day. Scientific and industrial exhibits will be displayed over the three-day period.

Registration forms, which include applications for hotel reservations, may be obtained from local Heart Associations or the AHA national office, 44 East 23rd St., New York, N. Y. 10010.

AMA To Meet June 20-24

What is expected to be the largest American Medical Association convention in history will be June 20-24 in New York City.

An attendance of 69,500, including 25,000 physicians, is expected. The largest previous AMA convention was in 1961 in New York City when 4,679 attended, including 23,083 physicians.

Dr. James Z. Appel, Lancaster, Pa., will be installed as AMA president. He succeeds Dr. Donovan F. Ward, of Dubuque, Iowa.

Six general scientific sessions will be coordinated by secretaries of various AMA specialty sections. Topics include hearing, adverse reactions, nonnarcotic drug addiction, metabolism in growth development and aging, diagnostic cytology, and organ transplantation.

Another highlight will be the fifth Multiple Discipline Research Forum, presented this year as a program of the AMA Section on Experimental Medicine and Therapeutics. AMA's other scientific sections also will present programs for physicians in their specialties.

The more than 350 scientific exhibits will be housed in the New York Coliseum. The Coliseum also will be the site of many scientific sessions and an extensive medical motion picture and television program.

The AMA's policy-making House of Delegates will meet in the Americana Hotel. Speaker of the House of Delegates is Dr. Milford O. Rouse, of Dallas, Texas. Dr. Walter C. Bornemeir, Chicago, is vice-speaker.

Members of the AMA Board of Trustees include Drs. Percy E. Hopkins, Chicago, Ill., chairman; Raymond M. McKeown, Coos Bay, Ore., AMA secretary-treasurer; Lester D. Bibler, Indianapolis, Ind.; J. B. Copeland, Austin, Texas; Gerald D. Dorman, New York City, N. Y.; Wesley W. Hall, Reno, Nev.; Charles L. Hudson, Cleveland, O.; Alvin J. Ingram, Memphis, Tenn.; Robert C. Long, Louisville, Ky.; Homer L. Pearson, Miami, Fla.; L. O. Simenstad, Osceola, Wis., and Dwight L. Wilbur, San Francisco, Calif. AMA President Ward, President-elect Appel, and Past President Edward R. Annis, M.D., Miami, Fla., are ex-efficio members of the Board.

Ob-Gyn Award Goes to James Wakham



Mississippi Obstetrical-Gynecological Society presented its annual award at the University Medical Center Honors Day to the medical student who submitted the superior paper representing original work in the field of obstetrics-gynecology. Pictured, left to right, are James Wakham, senior from Moorhead, and Dr. Karl Bolten, assistant professor of obstetrics-gynecology in the School of Medicine.

Thoracic Officers Discuss Plans



Members of the Mississippi Thoracic Society, medical section of the Mississippi Tuberculosis Association, recently elected Dr. Willard Boggan of Jackson president for 1965-66. Dr. Boggan (center), is shown discussing plans for the coming year with Dr. J. T. Hamrick, secretary-treasurer (left), and Dr. J. Fred Allison, executive committee representative (right). Other officers not pictured include Dr. T. T. Justice, Gulfport, vice president; Dr. H. K. Stauss, of Jackson, executive committeeman, and Dr. Jack Herring of Sanatorium, Tri-State Conference representative.

AUXILIARY

Rep. May To Address AMA Auxiliary

Rep. Catherine May (R-Wash.) and Harold Russell, chairman of the President's Committee on the Employment of Handicapped, will be the featured speakers at the annual convention of the Woman's Auxiliary to the American Medical Association, in New York.

More than 2,000 doctors' wives are expected to attend the June 20-24 meeting at the Americana Hotel. The Auxiliary president, Mrs. William H. Evans, Youngstown, Ohio, will preside.

On Monday, June 21, Mrs. May will speak at a luncheon honoring leaders of 75 national women's volunteer organizations and the wives of AMA's international guests. The program will also feature a presentation of costumes from foreign countries.

Following the luncheon, a forum on the cost of illness will be presented, and Mr. Russell, who won an Academy Award for his movie portrayal of a handicapped veteran, will discuss new frontiers for the handicapped.

Also appearing on the Monday program will be Dana Farnsworth, M.D., Harvard University, a member of the AMA Council on Mental Health. Reports on Auxiliary activities in international health and health careers round out the session.

Activity reports from the 50 state auxiliaries open the Tuesday, June 22 meeting. The presentation of the annual Health Mobilization Award for disaster preparedness programs, and reports on the Auxiliary's safety and rural health projects complete the agenda for the day.

AMA President Donovan Ward, Dubuque, Ia., will be guest speaker at the Tuesday luncheon honoring Auxiliary past presidents and AMA officers and trustees and their wives. Dr. Jack Schreiber, a member of the AMA Speakers Bureau, will be master of ceremonies. At that time, the Auxiliary's annual contribution to the American Medical Association Education and Research Foundation will be announced. Last year's gift was $306,318.14.

Mrs. Evans and Mrs. Richard A. Sutter, St. Louis, Mo., the president-elect, will be honored at a tea and fashion show Sunday, June 20. Miss Eleanor Lambert, director of the Ten Best Dressed American Women Awards, will be the commentator.

Mrs. Sutter will be installed as president at the concluding business session Wednesday, June 23. Election and installation of other national officers will be held then.

A post-convention conference for all Auxiliary members will be held Thursday, June 24. The 1965-66 service programs and chairmen will be presented, and Dr. Ernest B. Howard, AMA assistant executive vice president, will discuss principal actions of the AMA House of Delegates. In addition, a program on AMA's new Institute for BioMedical Research will be presented by Dr. Roy Ritts, Institute director, and Lyman Smith, Ph.D., director, AMA Education and Research Foundation.

The meeting, held at the same time as the AMA's 114th annual convention, will formally adjourn at noon Thursday.

All Auxiliary members, their guests and guests of physicians attending the AMA meeting may participate in the general sessions and social func-

tions. A special entertainment program has been planned for children.

Local arrangements of the convention are under the direction of Mrs. Leif G. Jensen, Staten Island, N. Y., and Mrs. Henry I. Fineberg, Fresh Meadows, N. Y.

Mrs. Gaddy Heads MSMA Auxiliary

Mrs. J. Hurd Gaddy of Long Beach was inaugurated president of the Woman's Auxiliary to the Mississippi State Medical Association during the auxiliary's 42nd Annual Meeting May 10-12.

A member of the auxiliary since 1952, Mrs. Gaddy has "been just about everything but treasurer" for the Gulfport Unit including secretary and president. Mrs. Gaddy has been on the board of the state auxiliary for the past five years. Her state offices include fourth vice president, health careers chairman, and councilor for the ninth district.



Mrs. Gaddy

In her community, Mrs. Gaddy has served as president of the PTA at St. Thomas School and as secretary of the school board of St. John's. Last year, she was first vice president of the Gulfport Junior Auxiliary and has also been active in garden club work and scouting.

The Gaddy's have four children, Deborah, 14; Beth, 12; Jimmy, 9, and Donnie 8.

State Group Meets For 42nd Session

During its 42nd annual session May 10-12 at the Buena Vista Hotel in Biloxi, the MSMA Woman's Auxiliary heard talks by leaders of the Southern Medical and AMA Auxiliaries and reports by state officers.

Mrs. J. Gordon Dees of Jackson was named president-elect and Mrs. J. Hurd Gaddy was inaugurated president as the meeting closed. Mrs. Gaddy succeeds Mrs. T. J. Safley of Jackson.



Guests of the MSMA Auxiliary for the 42nd annual session were Mrs. Richard A. Sutter, right, president-elect, AMA Auxiliary, Dr. Jack Schreiber of the AMA Speaker's Bureau, and Mrs. Jordan Kelling, president, SMA Auxiliary.

Guests of the Auxiliary were Mrs. Richard A. Sutter, president-elect, AMA Auxiliary, and Mrs. Jordan Kelling, president, SMA Auxiliary. Dr. Jack Schreiber of the AMA Speaker's Bureau was the luncheon speaker.

Other officers named in the annual elections were Mrs. Safley, first vice president in charge of publications; Mrs. Sam Caruthers, Grenada, second vice president in charge of public relations; Mrs. Julian Wiener, Jackson, third vice president in charge of publicity, and Mrs. H. H. McClanahan, Columbus, fourth vice president in charge of legislation.

Other elected officers are Mrs. Warren C. Jones, Forest, recording secretary, and Mrs. David B. Wilson, Jackson, treasurer.

Among those appointed to serve as officers and chairman are Mrs. W. Steve Sekul, Biloxi, corresponding secretary; Mrs. James T. Thompson, Moss Point, chairman of Doctor's Day; Mrs. F. G. Minkler, Pascagoula, Nurse Loan, and Mrs. R. A. Mitchell, Gulfport, safety.

Mrs. Frank Schmidt of Ocean Springs was named councilor from the ninth district.

In addition to Mrs. Gaddy and Mrs. Safley, delegates to the AMA annual convention will be Mrs. T. E. A. Baines, Jackson, and alternates, Mrs. W. C. Jones, Forest, and Mrs. George Twente and Mrs. Samuel Johnson, Jackson.

Mrs. Safley announced the Auxiliary now has 915 members.

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION
JACKSON, MISSISSIPPI

July 1965

Dear Doctor:

Only 3 out of 10 children in the so-called susceptible age brackets have been immunized against measles since the vaccine has been available. The National Disease and Therapeutic Index, a service which reports statistical data relating to private practice, says 8 million of the nation's 27 million children have been immunized.

> Pediatricians are giving 54 per cent of measles shots, GP's, 44 per cent, and all other specialties, 2 per cent. NDTI reports that although teenagers account for 10 per cent of measles patients, they are rarely given vaccine.

President Charles de Gaulle is annoyed because English is replacing French as the international language of science. In a letter to the elite French Academy, de Gaulle charged that French scientists - including physicians - "betray" their native tongue by reading papers in English at world-wide convocations.

Nurses at the Gainesville, Fla., Hospital are in favor of tossing out the traditional starched white uniforms in favor of pastel colors. A four year experiment with colored uniforms and caps in pediatrics showed that children had less fear of nurses, ate better, and submitted more readily to routine nursing services.

Fifteen Italian physicians have been tried by a Palermo court for raising money for North (communist) Viet Nam hospitals. Acting in behalf of a communist medical group, the physicians were said to have raised the Italian equivalent of $225,000. They were charged with collecting from public without a license.

A third more young Americans are applying for admission to the nation's 88 medical schools in 1965 than applied just four years ago in 1961. The Association of American Medical Colleges says that 19,000 applicants are vying for entrance this fall, all having taken the MCAT. An estimated 85,000 applications were filed, an average of 4.5 per prospective student.

Sincerely,

Rowland B. Kennedy
Executive Secretary

DATELINE - MEDICAL AMERICA

High Court Strikes Down Anti-Contraceptive Law

Washington - Connecticut's 1879 law forbidding prescription or use of contraceptives has been declared unconstitutional by the U.S. Supreme Court on a basis of invading "the area of protected freedom." The action, culminating in the 7-to-2 decision, was first brought by the state's Planned Parenthood League and Yale's Dr. C. L. Buxton who addressed MSMA's 95th Annual Session in 1963 on the same subject.

Medicare Assures Profit On Disability

New York - Economically, it's profitable to be ill or injured from occupational causes under an almost obscure section of the administration's Medicare proposal. Where occupational disability lasts six months and longer, the pending law would permit duplicate payments of workmen's compensation and cash benefits for disability under Social Security. Based on mean take-home pay, worker's "profit" would amount to 168 per cent of job earnings in Michigan under such circumstances. Other states studied show combined benefit payments ranging from 135 to 156 per cent of regular pay.

Computer Is Used In Epilepsy Research

Birmingham - The Medical College of Alabama has initiated a unique research project in which thousands of case histories in epilepsy are being processed through its computer to determine if there are previously undetected patterns in the symptoms of the disease. Project is assisted by the Epilepsy Foundation, a national voluntary health agency.

'Automation' Booms In Oral Hygiene

Chicago - Electric toothbrush sales hit an all-time high of $60 million in 1964 and may top $100 million this year. American Dental Association has initiated an approval program of the devices patterned largely after its dentifrice evaluation procedure. Spokesmen for electric toothbrush manufacturers attribute product popularity to rising level of dental health education and appeal to youngsters.

Insurance Industry Tops Record In Coverage And Payments

New York - America's insurance companies paid a record $4.7 billion to policyholders in 1964 in surgical, medical, hospital, and disability benefits. For the first time in industry history, disability income payments topped the $1 billion mark in a year. Health Insurance Institute says that coverage is at new high with 149 million having hospital insurance; 139 million, surgical; and 105 million, medical.

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ORIGINAL PAPERS

Hemangiomas of the Uterus

WARREN C. PLAUCHÉ, M.D.
Biloxi, Mississippi

Hemangiomas of the uterus are rare, generally benign, neoplasms of vascular origin. They are frequently incidental findings, but may occasionally be factors in problems involving rupture of the uterus, hemoperitoneum, meno-metrorrhagia, postmenopausal bleeding and uterine enlargement simulating pregnancy. Cases are presented emphasizing the role of hemangiomas in uterine rupture and postmenopausal bleeding.

HEMANGIOMAS ARE COMMON lesions in the human. Their occurrence in the uterus and other pelvic organs is, however, quite rare. This seems paradoxical because of the excellent blood supply of the pelvis and the cyclic changes in pelvic vascular structures with pregnancy and menstruation. Even in books focused on gynecologic pathology,[1] hemangiomas are mentioned only briefly. One hundred forty-two cases have been reported, with recent emphasis being on the hemangiopericytoma first described by Stout[2] in 1949.

Pedowitz *et al.*[3] presented the classic paper on this subject in 1955. In an effort to clear up the maze of conflicting names for these lesions in the literature, they offered a classification of vascular tumors of the uterus. This classification has become accepted and is presented herein for review (Table 1).

TABLE 1

VASCULAR TUMORS OF THE UTERUS

I. Benign Vascular Tumors of Blood Vessel Origin:
 1. Hemangioma
 (a) Capillary
 (b) Cavernous
 (c) Hemangiomatosis
 2. Angiomyoma
 3. Hemangioendothelioma (benign)
 4. Hemangiopericytoma (benign)

II. Malignant Vascular Tumors of Blood Vessel Origin (Angiosarcoma):
 1. Hemangioendothelioma (malignant)
 2. Hemangiopericytoma (malignant)

III. Vascular Tumors of Lymphatic Origin.

(After Pedowitz *et al.*)

This paper will review the benign hemangiomas of the uterus and report two new cases.

PATHOLOGIC FINDINGS

Hemangiomas, as they appear in the uterus, retain the characteristics of these vascular tumors elsewhere in the body. They are reddish or purplish in hue, blanch when pressure is applied, and occasionally are pulsatile. Unlike hemangiomas of the skin, uterine hemangiomas are apparently true neoplasms with the capacity for independent growth.[3] They may be polypoid endometrial lesions; or in the submucous, intramural, or subserous portion of the myometrium, or on the ectocervix. A rare form of intramural, diffuse hemangioma produces a symmetrically enlarged, purplish uterus not unlike that seen in early pregnancy. Uterine hemangiomas vary in size from quite tiny to 25 centimeters in diameter.

Microscopically, these tumors are composed of dense groups of vascular spaces lined by a single

layer of flat, endothelial cells. The vascular channels of the capillary hemangioma are narrow and relatively bloodless. The presence of thick-walled, newly formed capillaries distinguishes this lesion from passive congestion of the uterus.[1, 3] The majority of the vascular spaces of the cavernous hemangioma are blood filled and widely dilated.

CLINICAL FINDINGS

Hemangiomas of the uterus may occur at any age. They are most frequently found in the fourth and fifth decade of life,[3] probably because they are often incidental findings, and it is at this age that pelvic surgery is most common. Parity has no relation to the incidence of these tumors.[5]

Symptoms are related to the size and location of the tumor. They often cause no symptoms. Abnormal vaginal bleeding is fairly frequent, presenting as either menorrhagia, intermenstrual, or postmenopausal bleeding. Disruption of vascular spaces in subserous tumors may cause intra-abdominal hemorrhage. Bleeding is only occasionally severe. Lesions on the cervix may bleed with the trauma of douching or coitus.

Since these tumors are slow-growing, they are rarely a source of pain. Pain usually indicates degeneration of the tumor or a sudden increase in pelvic congestion, as with pregnancy. Hemangiomas occasionally do grow rapidly, however, and may present as a symmetrical, soft, enlarging uterus mimicking an early pregnancy.

MANAGEMENT

Since hemangiomas are almost always benign, they may be treated by local excision in cases where their location and size make this feasible. Radiation, reportedly, is of little value as the lesion almost always recurs.[3] A D & C may suffice in pedunculated endometrial lesions; however, curettage may open large vascular spaces in submucous lesions, with attendant profuse hemorrhage. In the small percentage of cases which prove to be angiosarcomas, the recommended treatment is total abdominal hysterectomy and bilateral salpingo-oophorectomy with postoperative administration of deep x-ray therapy to the pelvis, though the value of the latter is not conclusive. In these cases the prognosis is poor. Widespread hematogenous metastases are frequent and five year survival is approximately 30 per cent.[3, 4]

CASE 1

This 25-year-old white female, gravida 1, para 1, experienced an uncomplicated vaginal delivery in 1961. A late postpartum hemorrhage secondary to retained placental fragments was treated by curettage. She menstruated normally for six months, then developed secondary amenorrhea. A hystero-salpingogram, performed as part of the investigation of this syndrome, revealed an attenuated uterine cavity with multiple "sinus tracts"

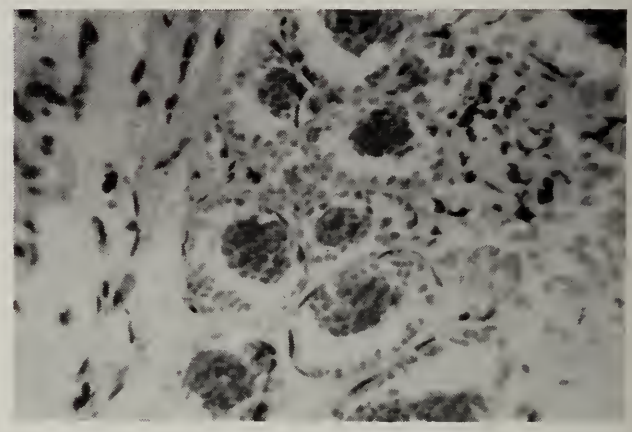


Figure 1. Case 1. Hemangioma of uterus.

into the myometrium. This was interpreted as compatible with adenomyosis. A few days later, preliminary to a D & C, a uterine sound was passed into the uterine cavity. It "met no resistance" and a diagnosis of uterine perforation was made. An exploratory laparotomy was performed. At this time, the uterus was noted to be slightly enlarged and soft. Ovaries and tubes were normal. A perforation in the lower fundus was noted and closed with a single figure 8 suture. Near this perforation was a dark red lesion 2 cm. in diameter resembling an endometrioma. It was excised by wedge resection. This lesion was described microscopically as a capillary hemangioma with areas of focal necrosis. This patient recovered uneventfully but has not resumed normal menses.

CASE 2

This 80-year-old white female, gravida 4, para 4, who had ceased menstruating 30 years before, experienced postmenopausal spotting vaguely related to the ingestion of a geriatric hormone-vitamin preparation containing small amounts of Premarin. A Pap smear was Class I, and pelvic examination was normal except for atrophic vaginitis. Medical workup revealed previously unsuspected diabetes and hypertension. An endometrial biopsy revealed fragments of proliferative

endometrium and large, thin-walled vascular spaces filled with blood. A D & C under paracervical block revealed the uterus to be one and one-half times normal size and soft. Curettings were

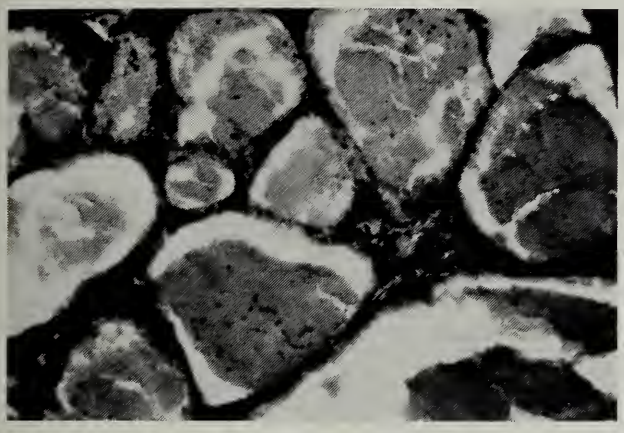


Figure 2. Case 2. Hemangioma of endometrium.

described as "small fragments of pinkish tissue resembling proliferative endometrium." Blood loss was minimal during the procedure. Microscopically, this tissue was read by two pathologists to be compatible with portions of a cavernous hemangioma of the endometrium. Because of her age and medical complications, no further therapy was undertaken at that time. She has had no vaginal bleeding since her D & C.

COMMENT

Case 1 points up one of the problems reported to occur with hemangioma of the uterus, i.e., perforation at the time of diagnostic procedures. A hemangioma may weaken the uterine wall by replacement of usual uterine muscle architecture with friable, soft, vascular tumor. Ziegerman reports a case of uterine perforation at D & C.[4] Pedowitz reports two cases of rupture of the uterus during pregnancy in an area involved by hemangioma.[5]

Case 2 reveals hemangioma of the endometrium to be an unexpected factor in post menopausal bleeding. Simple curettage proved to be curative in this case. ★★★

1210 West Division St.

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QUANTUM SUFFICIT

The sailor limped into the naval hospital, seeking care for his painfully injured foot. It was x-rayed, and he was told to take a seat and wait for the results of the film. Soon an orderly appeared and handed him a large pill.

The sailor hobbled over to the water fountain and with great difficulty, swallowed the pill and resumed his patient waiting.

Soon the orderly reappeared carrying a large bucket of warm water. "All right," he told the sailor, "let's drop the pill into this bucket and soak the foot."

A Clinical Study of 35 Patients With Renal Adenocarcinoma

GEORGE R. PARK, M.D.
Doddsville, Mississippi

PRIMARY MALIGNANT NEOPLASMS of the kidney are of four types: adenocarcinoma (hypernephroma), embryomas (Wilms's tumors), transitional cell carcinomas of the renal pelvis, and sarcomas.[1] Adenocarcinomas comprise more than 80 per cent of these growths.[2, 3] During recent decades the protean manifestations, the late diagnosis, and the delayed recurrence have focused the physician's attention on this tumor. The purpose of this review is to study the characteristics, diagnosis, and treatment of 35 cases with renal adenocarcinoma.

METHODS AND MATERIALS

Thirty-five case histories were available for study. They comprised all of the cases of renal adenocarcinoma initially diagnosed at the Veterans Administration Hospital and University Medical Center, Jackson, Miss., from July 1955 until July 1962. In each case the diagnosis was established by histologic identification of the tumor. No attempt was made to histologically subclassify the hypernephromas in this study.

CHARACTERISTICS OF THE GROUP

This series consisted of 35 cases. Eleven males were diagnosed at the Veterans Administration Hospital and 24 patients (12 male and 12 female) were found at the University Medical Center. Antemortem tissue diagnosis was obtained in 33 of the 35 patients. In one of the other two cases, hypernephroma was clinically suspected on the basis of abnormal urographic studies. The remaining patient was a 66-year-old white man in whom the tumor was an incidental finding at postmortem examination. This patient died with lymphocytic leukemia and was the only one in the group to have a coexisting malignancy. This frequency of coexisting malignancy correlates with the report by Evans, Halpern, and Finby[4] that 2 of their 100 cases of hypernephroma also had leukemia.

The median age at the time of diagnosis was 50. Sixty-three per cent of the cases were between 40 and 60 years of age. This figure agrees with the general age incidence in most series.[1, 4] The ages of the two youngest patients were 6 and 10. Their diagnosis of adenocarcinoma, not Wilms's tumor, was confirmed by a review of slides of their biopsy specimens. Only 29 other cases of hypernephroma are reported during infancy and childhood in a recent review of the literature.[5]

During recent decades, the protean manifestations, the late diagnosis, and the delayed recurrence have focused attention on renal adenocarcinoma. The author reviews a series of 35 cases discussing in detail the case histories of two patients. Experience with chemotherapy and surgery is reported.

There was no recognizable preference for the neoplasm developing on a particular side. Sixteen involved the left kidney and 19 the right. A postmortem examination was performed in only 7 of the 25 cases now dead since the majority of deaths occurred outside the hospitals.

MEANS OF DIAGNOSIS

Of the 33 antemortem tissue diagnoses, 58 per cent were made by histologic study of nephrectomy specimens; 39 per cent by biopsy (including 12 per cent by biopsy of the primary site of an inoperable tumor at the time of exploration) and 3 per cent (one patient) at pneumonectomy. A further breakdown of the diagnoses obtained by biopsy revealed 2 from lymph node biopsies.

From the Department of Medicine, University of Mississippi School of Medicine.

3 from bone (sacrum, rib, and ilium), 1 from lung, and 2 from liver. Table 1 summarizes the source of tissue establishing the diagnosis of hypernephroma.

TABLE 1

SOURCE OF TISSUE ESTABLISHING DIAGNOSIS OF HYPERNEPHROMA

Antemortem	
Nephrectomy specimen	19
Biopsy	
Kidney at operation	4
Extrarenal	9
Pneumonectomy specimen	1
Postmortem	
Kidney	2
Total	35

Ten of the 33 cases diagnosed antemortem were alive and well at the time of this review with the length of follow-up ranging from 2 to 5 years. Twenty-two (67 per cent) of these 33 cases were known to have distant metastases at the time of diagnosis. This compares with figures of 33 to 67 per cent in other studies in which metastases were found at the time of diagnosis of the primary tumor.[6, 7] Two of these 22 metastatic cases were reportedly alive and well 2 years (Case 1) and 5 years (Case 2) after diagnosis.

CASE 1

Case 1 was a 53-year-old Negro male who was admitted to the University Hospital in May 1960 with a weight loss of 100 pounds and progressive anorexia and malaise over a 13 month period. Examination revealed the liver to be enlarged five fingerbreadths below the right costal margin. A chest film and long bone survey were unremarkable. An intravenous pyelogram "suggested polycystic disease of the left kidney and some dilation of the superior calyces of the right." A liver biopsy was attempted and produced tissue diagnostic of adenocarcinoma of the kidney. The malignancy was considered "too far advanced for operation or chemotherapy," and the patient was discharged. The patient did not return for follow-up appointments. Twenty-three months after diagnosis, however, his private physician reported him alive and well.

No explanation of this phenomenon is attempted in the absence of first hand follow-up.

CASE 2

Case 2 was a 25-year-old Negro female who presented with pain in her right flank and gross hematuria during the third trimester of a twin pregnancy in November 1955. An intravenous pyelogram revealed hydronephrosis on the left and nonfunction on the right. Following parturition in January 1956 she did not return to the hospital until recurrence of her right flank pain and hematuria in April 1956. A chest film revealed a 2 x 2 cm. coin lesion in the mid-right lung field. A right nephrectomy was performed May 8, 1956. Thirteen days later a right middle lobectomy and removal of an adjacent lymph node extirpated all clinically evident neoplasm. All of these surgical specimens contained adenocarcinoma of renal origin. Subsequently the patient has done well. An abdominal exploration at the time of a tubal ligation in February 1959 showed no evidence of local recurrence. The patient was last seen 74 months after diagnosis and was doing well.

The result in this case confirms the axiom that a solitary metastasis should not preclude nephrectomy if the metastasis can be removed.[8] Murphy and Fishbein[7] reported that only one of their 13 patients survived more than two years following removal of the primary tumor and metastasis. It should also be borne in mind that the tumor may recur as late as 22 years after nephrectomy[9] and that on rare occasions metastases appear after nephrectomy.[9, 10]

Thirty-four of the patients developed signs or symptoms referable to hypernephroma prior to death. The mode of clinical onset, summarized in Table 2, was definitely due to the primary growth

TABLE 2

MODE OF CLINICAL ONSET IN PATIENTS WITH HYPERNEPHROMA

	Per Cent
Due to Primary Tumor	
Pain	32
Hematuria	26
Mass	12
Total	70
Due to Metastasis	
Skeletal pain	9
Pulmonary symptoms	9
Lymph node enlargement	3
Mass—shoulder	3
Total	24
Constitutional (malaise, weight loss)	6
Grand Total	100

in 70 per cent of the cases and to metastases in 24 per cent. In 6 per cent of cases it was not clear whether the initial signs or symptoms were produced by the primary or secondary growth. A breakdown of the mode of clinical onset revealed that the presenting symptom was pain due to the primary tumor in 32 per cent, hematuria in 26 per cent, and abdominal mass in 12 per cent. Among the 24 per cent of cases in which the initial symptom was due to a metastasis, 9 per cent were heralded by skeletal pain, 9 per cent by pulmonary symptoms, 3 per cent by lymph node enlargement, and 3 per cent (one) by a mass in the shoulder. The mode of onset was due to constitutional symptoms of malaise and weight loss in the remaining 2 (6 per cent) of the cases; and no conclusion could be drawn as to whether or not metastases had occurred at the time of their onset.

CLINICAL SIGNS AND SYMPTOMS

A history of gross hematuria was obtained in 46 per cent of the patients. In other series[4, 7] hematuria was mentioned in 48 to 58 per cent of the cases. Gross hematuria had been called to a physician's attention in 3 of our cases between 2½ and 4 years prior to diagnosis. This type of delay stresses the axiom of thorough investigation of all cases of hematuria.

An abdominal mass was found in 46 per cent (16) of the cases. This compares with reported figures of 15 per cent by Evans *et al.*[4] and 37 per cent by Murphy and Fishbein.[7] Hepatomegaly was present in 23 per cent (8) of our cases. Three of the cases with hepatomegaly had no palpable abdominal mass. Pain was a prominent symptom in 57 per cent of the cases and usually paralleled the site of tumor growth. Others report the incidence of pain to be between 20 and 60 per cent.[11, 12] The prominence of abdominal mass and pain in our series is felt due to the patients in our population group making a later appearance at our hospitals.

Fever greater than 99.8°F was present on admission in only 9 per cent (3) of our patients. Others[7] report figures as high as 33 per cent. Berger[13] reported 15 per cent of his cases presented only with the sign of fever which was attributed to the renal adenocarcinoma itself. The fever on admission in all three of our cases was explained on the basis of a low grade urinary tract infection related to recent instrumentation. None of our patients had polycythemia. Other larger studies[4, 7] report hypernephroma producing polycythemia in from 2 to 5 per cent of the cases. Table 3 summarizes the clinical signs and symptoms in our 35 cases of hypernephroma.

TABLE 3

CLINICAL SIGNS AND SYMPTOMS IN 35 CASES OF HYPERNEPHROMA

	Per Cent
Pain	57
History of hematuria	46
Abdominal mass	46
Hepatomegaly	23
Fever on admission (greater than 99.8°F)	9
No urologic symptoms	17

The difficulty in diagnosing hypernephroma is pointed out by the fact that in 17 per cent of our cases there were no urologic symptoms. Laboratory aids, except for the demonstration of hematuria on examination of the urine, were of little benefit in establishing the diagnosis. Hematuria was found microscopically on admission in 52 per cent of the cases, including 14 per cent who had gross hematuria. The erythrocyte sedementation rate was done in only 17 per cent of the cases and was greater than 30 mm. in 1 hr. (uncorrected) in all of these. The C-reactive protein was positive in the 2 patients on whom this test was done. A BUN greater than 22 mg. per cent or an NPN greater than 40 mg. per cent was found in only 14 per cent of the cases. In this 14 per cent the values were only slightly elevated or fell to normal following surgical relief of coexisting urinary tract obstruction.

An intravenous pyelogram was performed in 32 of the 35 cases and all except one (case no. 1) suggested further investigation. None of the 34 cases studied for nephrolithiasis had stones and only 2 had nephrocalcinosis. One of these 2 cases had skeletal metastases.

RESULTS OF THERAPY

Table 4 summarizes the clinical course of the 33 cases with antemortem tissue diagnosis of hypernephroma. Sixty-seven per cent of these 33 patients had known distant metastases at the time of diagnosis. After diagnosis, 13 cases were considered "too advanced" for surgery. Nephrectomy was performed in 20 of the 33 cases. Nine of these 20 patients had known distant metastases at the time of surgery. In 8 of these 9 the surgery had no known effect on the course of the malignancy. The ninth case, Case 2, also had removal of obvious metastatic lesions from her

thorax. Her subsequent successful 74 month follow-up has been described above. In 11 of the 20 patients undergoing nephrectomy no distant metastases were known at the time of diagnosis. Three of these 11 died within 18 months after nephrectomy. Two of these 3 were known to have died from a recurrence of their tumor. The cause of death in the third was unknown. All of the remaining 8 undergoing nephrectomy without known metastatic spread are living and well with follow-up periods ranging from 2 to 5 years. Four of these 8 survivors had spread of the tumor into the renal vein at the time of nephrectomy. They have had no additional therapy.

TABLE 4

CLINICAL COURSE OF 33 CASES WITH ANTEMORTEM TISSUE DIAGNOSIS OF HYPERNEPHROMA

		Living	*Dead*
Known Distant Metastases at Time of Diagnosis			
With nephrectomy	9	1 (Case No. 2)	8
Without nephrectomy	13	1 (Case No. 1)	12
Total	22	2	20
No Known Distant Metastases at Time of Diagnosis			
With nephrectomy	11	8	3
Without nephrectomy	0	0	0
Grand Total	33	10	23

All 10 of the 33 patients diagnosed antemortem who have lived, have survived over 2 years. Of the 23 who have died, 9 died within 4 months after diagnosis, 7 between 4 and 8 months, 4 between 8 and 12 months, and 3 between 12 and 24. There have as yet been no deaths or known recurrences after a 24 month follow-up period. Other studies indicate that these figures, showing a lack of late recurrences, in our small study should not be misleading as to the frequency with which these recurrences do take place. To point this out, a review of 1183 cases of operable renal carcinoma showed a 50 per cent 3 year survival, a 40 per cent 5 year survival, and only a 20 per cent 10 year survival.[14]

Surgery, chemotherapy, and radiation, both separately and in combination, were available as therapy to the patients. No therapy was given in 8 of the 33 patients for whom it was considered because of the advanced stage of the tumor. In 13 cases nephrectomy alone was undertaken. Two of these had known distant metastases at the time of operation and both later expired. In the 11 without known distant metastases who underwent nephrectomy alone, 8 have survived more than 2 years. One patient, Case 2, underwent nephrectomy and removal of pulmonary metastases and has been commented on previously. Two cases received between 2000 and 3500 r of radioactive cobalt to skeletal areas for pain due to bony metastases. The one receiving 2000 r obtained "questionable temporary relief of pain" and the other had "complete relief of severe pain." Another with widespread disease received 1000 r over the area of one kidney before it was discontinued due to the rapid deterioration of the patient. No clinical effect was noted with this small dose.

Six of the patients received both nephrectomy and chemotherapy with adequate trials of chemotherapy being given in 3 of these cases. An adequate trial of chemotherapy was regarded as one in which (1) the drug was given for at least 2 months, and (2) the platelet count was depressed below 100,000/cu. mm. or the peripheral neutrophil count below 1000/cu. mm. Two patients received chemotherapy alone. In one of these the trial was considered adequate. The 4 cases that received adequate trials of chemotherapy were treated with nitrogen mustard, Cytoxan®, and Thiotepa®, singly or in series.

Thus, six courses of adequate chemotherapy were given in 4 patients. Parameters utilized to determine whether an adequate course of chemotherapy was successful in producing palliation consisted of objective decrease in liver size or arrest of the increasing size of pulmonary metastasis. According to these standards, the three courses of nitrogen mustard produced probable palliation in one case, possible palliation in another, and probably no palliation in a third. The one course of Thiotepa® produced probable palliation, and the two courses of Cytoxan®, one intravenous, one oral, resulted in no palliation.

COMMENTS

Only a general idea as to the length of time between the onset of symptoms and the first visit to a doctor can be made in a retrospective study of this nature. Also the time required for establishment of the definitive diagnosis is subject to much inexactness. From a review of our cases in which information of this type was available it was generally found that the patient visited his physician within a matter of a few days or weeks after the onset of symptoms. Two cases, however, waited as long as 11 months before their first visit.

In the interval of time before the diagnosis was then made, however, the delay was much greater. The time required for diagnosis was 2 months, or more, in 17 of the cases where information with the time relationships was available. One patient had a mass in her flank that gradually increased in size for 11 years prior to diagnosis. After removal of her hypernephroma she has done well for the past 4 years. The median time required for making the diagnosis in these 17 cases, where the delay was greater than 2 months, was one year after the patient's first visit to a physician. In this series, institution of treatment, if any, followed shortly after the diagnosis. Although in some cases the time between the first visit to the doctor and the time of diagnosis was lengthened by poor patient cooperation, it was more often due to failure on the part of the clinician to recognize the protean manifestations of hypernephroma. In defense, it should be pointed out again, however, that 17 to 33 per cent of cases of renal adenocarcinoma present without any urologic symptoms.[15]

SUMMARY

A series of 35 cases of renal adenocarcinoma is reviewed. The protean manifestations, late diagnosis, and variable course are emphasized. One case with surgical removal of both hypernephroma and pulmonary metastases, and no tumor recurrence in 74 months, is discussed. There was one instance of coexisting leukemia and no cases of polycythemia in this series.

Experience with chemotherapy and surgery is mentioned. Limited use of nitrogen mustard, Cytoxan®, and Thiotepa® in attempting to provide palliation is discussed. Nitrogen mustard provided probable palliation in 1 of 3 cases treated and Thiotepa® in 1 of 1. Two courses of Cytoxan® provided no palliation. ★★★

Route 1

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MOTIVATIONAL MATRIMONY

Even the teenagers are turning to analysis. Two young girls were discussing their favorite subjects, boys. Said the first: "Johnny is going to propose to me soon."

"How can you be sure he will?" asked the second.

"Easy enough," was the reply. "He has already begun to hate my mother."

Clinicopathological Conference LXVI

Conducted by the Department of Pathology
University of Mississippi School of Medicine
Jackson, Mississippi

CPC LXVI concerns a five-year-old colored male who was well until August 1963, when he fell and fractured his left tibia. After the cast was removed a month later, the patient refused to bear weight on the leg. Other symptoms at this time included vomiting and fever. In October 1963, the child's eyes became "crossed" and the fever returned and was intractable to aspirin. The patient complained of headache, his speech became unintelligible, and his lethargic state progressed.

Discusser are Drs. Forrest T. Tutor, Robert A. Sloan, Joel G. Brunson, and John A. Gronvall.

THIS WAS THE FIRST University Hospital admission of this 5-year-old colored male who was well until August 1963. At this time, he fell into a hole and fractured his left tibia. The fracture was reduced at his local hospital and a cast was applied. The child was very active, however, in spite of the cast and played with other siblings. The cast was removed the latter part of September 1963, and it was at this time the patient was noted to "limp" on his left leg. He refused to bear weight on the leg and tended to fall to the left side. In early October 1963, the patient noted onset of vomiting. This was described as "coughing up" by the mother and occurred during or after meals. The mother noted that the child had felt warm and "had a fever." It was also noted that the child was more lethargic and tired than usual.

In mid-October 1963, the child's eyes became "crossed." The mother noted that the patient had difficulty focusing his eyes and they began "dancing." The fever returned and was intractable to aspirin. The fever was not confirmed with a thermometer, however. The patient complained of headache and it was now noted that the speech was becoming affected. Toward the end of October, the patient's speech had become unintelligible, and the mother noted that excessive salivation was present. Shortly before his admission here, the patient's lethargic state progressed, and he was hospitalized at a local hospital. At this time a lumbar puncture was done but the results were not known. There were several instances when the child was noted to reflux liquids through his nose on swallowing. Past history revealed that the child had had measles, mumps, and chickenpox during the past year. There had been no immunizations except to smallpox.

LABORATORY DATA

On admission the blood pressure was 108/40, pulse was 110, respiration 18, temperature 99.6. The initial appearance was that of a severely lethargic colored male child. Examination of the ears, eyes, nose, and throat was normal except for the neurological system. The neck was supple, lungs were clear to auscultation, and examination of the heart disclosed no murmurs or abnormalities of rhythm. The liver was palpable two finger breadths below the costal margin. On neurological examination, the sensorium was depressed. The patient would attempt to speak, but this was difficult to understand.

Cranial nerve examination: II: The optic discs were sharp, the visual fields were full and acuity was apparently normal. III, IV and VI: There was bilateral sixth nerve weaknesses. The pupils were round and regular and reactive to both light and accommodation. V: Facial sensation was intact. VII: There was thought to be a slight weakness of the left side of the face; however, the right eye would not close well. VIII: Hearing was normal. IX: There was no gag reflex. X: The uvula was in the midline, speech was garbled. XI: Was

not tested. XII: Tongue was in the midline on protrusion.

On motor there was a generalized weakness; however, this was more marked on the left than on the right. Deep tendon reflexes were 3-4+ and there was a bilateral Babinski response. There was an unsustained ankle clonus on the left side. The sensory examination revealed normal pinprick appreciation. Gait and station were not tested because of the patient's inability to stand. On examination of the cerebellar system, the finger to nose test with the left arm was performed unsatisfactorily and there seemed to be slight dysmetria present. There was no nystagmus.

HOSPITAL COURSE

On admission the patient was started on IV fluid due to his moderate dehydration. Lumbar puncture was done revealing an opening pressure of 90 mm. with clear, colorless spinal fluid. The CSF protein was 63 mg. per cent, glucose 123 mg. per cent, chloride was 126 mg. per cent. There were no cells in the spinal fluid, and the cultures were sterile. The initial hemoglobin was 12.5, hematocrit 38, white count 9,800, and the differential was lymphs 6,860, seg. 2,744, and bands 98. The sedimentation rate was 46. The initial electrolytes were normal.

An EEG done on Nov. 15, 1963, revealed no focus but the record was dominated by 4-5 per sec. activity. This was indicative of diffuse cerebral impairment. On the patient's second hospital day, Prednisolone was started at 10 mg. every 6 hours. This was continued throughout the hospitalization. Immediately after starting the Prednisolone, the child seemed to improve mentally, but this did not continue. Chest and skull x-rays on Nov. 7, 1963, were essentially normal, and a pneumoencephalogram was attempted on Nov. 13, 1963, and again on Nov. 21, 1963, but was unsuccessful due to failure to fill the ventricular system with air. A brain scan done on Nov. 26, 1963, revealed an ill-defined suspicious area of activity in the right posterior fossa. This was not well demarcated on the lateral scans. During the patient's hospitalization, the lethargic state progressed. On Nov. 22, 1963, the patient was stuporous and on Dec. 1, 1963, the patient was comatose. The pupils were small and constricted and did not react to light. On Dec. 2, 1963, he developed an irregular slow pulse and the pupils became dilated and fixed. Respiration ceased at 9:35 a.m. on Dec. 2, 1963.

Dr. Forrest T. Tutor: "I would like to compliment the author of this protocol. I think it is very well written. It has the usual sprinkling of what I interpret as 'red herrings,' but underneath there seems to be a clear cut clinical description. The case for discussion is one of a 5-year-old colored male child who apparently was well until August 1963 at which time he fell and fractured his left tibia. It is not too unusual for a 5-year-old to fall but, in view of later developing facts, I wonder if this fall in itself was not evidence of some neurological deficit such as weakness or incoordination of the left lower extremity.

"The leg was casted and apparently during this time the child was doing very well. After removal of the cast, the child was noted to have a limp of the left leg with a reluctance to bear weight on the left leg and a tendency to fall to the left. These facts probably point to weakness of the left lower extremity or lack of muscle coordination of that extremity rather than difficulty with the fracture.

"During the next month the child first had difficulty with eating and this was in the form of 'coughing up' his feedings. He also was described as feeling warm and having a temperature by his mother but apparently this was never confirmed with a thermometer. The child became lethargic and fatigued easily. He also developed a strabismus, his eyes became crossed and he had difficulty focusing them. Some headache occurred and the speech became affected, later to become completely unintelligible, and excessive salivation was noted.

"There was deterioration of the conscious level, and the child was hospitalized at which time a spinal tap was done—the results of which we do not know. I think that we probably would have had the information passed on to us as the patient was referred if this spinal tap had shown some abnormality of the spinal fluid. The child developed reflux of liquids through his nose on swallowing. I think that this is simply a progression of the problem described previously as 'coughing up' of his feedings.

"The past history was remarkable only in that he had his inoculations. The physical examination showed blood pressure and respiratory rates to be unremarkable. The pulse was fast and the temperature was taken and found to be 99.6. It is not recorded whether this was a rectal or oral temperature. I am assuming that due to the patient's conscious level this was a rectal temperature, and if so, it was normal. The child was

described as being severely lethargic. The ENT examination was normal. There was no nuchal rigidity. The heart and lung examination was normal. The liver was described as two finger breadths below the costal margin. I can not explain the liver enlargement. I would question this being a real finding.

"The neurological examination showed decreased conscious level. The speech was difficult to understand. I suspect that this was probably a bulbar type of speech due to involvement of the lower cranial nerves. Fundoscopic examination showed no signs of increased intercranial pressure. This is a very important point as will be brought out later. Fields were full and the acuity was normal.

"Examination of the extra-ocular nerves showed a bilateral VI nerve palsy. Pupilary function was normal. The fifth nerve was intact. There was a slight weakness of the left VII nerve described and also a note that the right eye could not be closed completely. I suspect that in addition to the bilateral VI nerve palsy the patient probably had a bilateral VII nerve palsy. The VIII nerve was felt to be normal but the IX cranial nerve was involved as evidenced by lack of gag reflex. The XI was not tested, and the XII was apparently intact with the tongue protruding in the midline.

"Muscular power was weak in general but seemed to be more involved on the left side of the body. Reflexes were increased to a pathological level of 3-4+, and there was further evidence of pyramidal tract involvement as evidenced by bilateral Babinski response and unsustained ankle clonus on the left side. The sensory examination showed normal response to pinprick throughout. The patient could not stand. We are led to believe that this was because of his conscious level, and this was probably true. I suspect that even if this patient had been conscious enough to stand he would have had some difficulty with his gait since we are told that point to point testing was done less good on the left than on the right and there was a slight dysmetria on the left side. There was no nystagmus.

"The child was admitted and started on IV fluids because of dehydration and another spinal tap was done which was normal as far as pressure and color was concerned. The protein was somewhat elevated at 63 mg. per cent; the glucose was slightly elevated if the blood glucose was normal. The spinal fluid glucose is usually about two-thirds the blood glucose level, and the child may well have been on IV at this time, accounting for the glucose being elevated. Chlorides were described as being 126 mg. per cent. I think this was probably 126 mEq per liter insteal of mg. per cent because the normal chlorides, as NACL, is in the region of 700 mg. per 100 ml. There were no cells in the spinal fluid, and the cultures were sterile.

"The blood picture showed some lymphocytosis, and the sedimentation rate was somewhat increased. Electrolytes were normal. The EEG was reported as showing no focus, but there was a generalized slowing of the activity. This is compatible with a generalized cerebral disfunction as seen in lethargic states and during sleep. The patient was started on steroids on the second hospital day, and this was continued throughout the hospitalization. At first it was felt that the child benefited somewhat from the steroids but later he failed to improve further.

PNEUMOENCEPHALOGRAMS

"Chest and skull x-rays were normal. At this point it was decided to do a pneumoencephalogram, and this was tried on two occasions with no filling of the ventricular system. In mass lesions of the brain, especially posterior fossa lesions, no air will get into the ventricular system when a pneumoencephalogram is done. The brain scan was suspicious of an area of increased activity in the posterior fossa on the AP view but this was not confirmed on the lateral view. We like for a lesion to show on both the AP and the lateral view of the brain scan before making any definitive interpretation from the study. The conscious level deteriorated further—the child lapsed into coma and at this point the pupils were described as being small and constricted. Small and constricted pupils, in the absence of drugs to account for this condition, is quite commonly seen with pontine lesions and this may be important in this case. Terminally, of course, the pupils became dilated and fixed, as we would suspect, and the child expired on Dec. 2, 1963, approximately three months from the onset of this illness.

CLINICAL COURSE

"So we are dealing with a fatal disease in a 5-year-old colored male with a clinical course of approximately three months. There is involvement of multiple as well as bilateral cranial nerve findings. There is bilateral VI nerve palsy and probably bilateral VII nerve palsy, at least there is VII nerve palsy on one side. The IX and the X cranial nerves are involved. So we have a le-

sion that is including the pontine-medulla areas of the brain stem. There is also evidence of pyramidal tract disfunction, and cerebellar disfunction. In spite of all these findings there were no signs of increased intracranial pressure either on fundoscopic examination, skull x-rays, or spinal tap. So we have a lesion in the posterior fossa that is not producing increased intracranial pressure. Posterior fossa mass lesions usually produce increased intracranial pressure very early. Given a patient in this age group with a three month course leading to death with multiple and bilateral cranial nerve findings, pyramidal tract signs, and cerebellar signs with no increased intracranial pressure, this is almost pathognomonic of an infiltrative lesion in the brain stem. In this age group, a brain stem glioma is by far the most likely diagnosis. This is my diagnosis.

"Brain stem gliomas most commonly are confused with bulbar polio, cerebral palsy, cerebral vascular disorders of the brain stem and encephalomyelitis, tuberculous meningitis, and other chronic types of meningitis such as tuberculous or cryptococcal meningitis. I think there is evidence against this being bulbar polio because of the long clinical course, the lack of cellular response in the spinal fluid, and the absence of respiratory failure until the time of death. Respiratory difficulty in bulbar polio is usually a very real thing. The case for cerebral palsy is certainly not very good because we are led to believe that this child was normal until he was age five, and the clinical course is certainly not that of cerebral palsy.

"As far as encephalomyelitis is concerned, this is usually acute in onset. It may have chronic sequelae, but it is usually a much more acute disease than this patient presented. It is also accompanied by a cellular response in the spinal fluid and the spinal fluid pressure is usually elevated. The syndrome of the multiple and bilateral cranial nerve findings, pyramidal tract signs, and cerebellar signs, without increased intracranial pressure is not seen very often as such a definite clinical picture in encephalomyelitis. Cerebral vascular disorders are rare to begin with in children, and they usually present as a very acute picture rather than a chronic one. Tuberculous meningitis and other chronic as well as acute mengitis would have characteristic spinal fluid findings.

"The first, and probably the most outstanding, thing in this case was the decreased conscious level. With an intracranial mass lesion, the decreased conscious level is usually due to increased intracranial pressure. We know already that there was no increased intracranial pressure in this case. The other way that a patient can have decreased conscious level in a posterior fossa lesion is involvement of the reticular formation. I think we have a lesion involving the reticular formation in the brain stem accounting for the decreased conscious level. Lesions in the reticular formation of the brain stem will result in a somnolent, lethargic, or comatose patient because the reticular formation apparently serves as sort of a driving force to the frontal lobes of the brain to produce consciousness.

"The speech difficulty is probably due to involvement of IX and the X cranial nerves which come off the brain stem at the level of the cerebellum and medulla. The VI cranial nerve comes off at the junction of the medulla and the pons, and we know that there was bilateral VI nerve involvement. The VII and VIII cranial nerve comes off just below the VI and above the IX and the X so we have this area implicated. There was weakness of the left side of the face and perhaps the right side of the face involving the VII cranial nerve. There was no gag reflex which is due to involvement of the IX nerve. There was an early limp followed by a generalized weakness with more weakness on the left side than on the right, increased deep tendon reflexes, 3-4+ bilateral Babinski signs, and unsustained clonus. These findings are due to implication of the pyramidal tract as it comes through the brain stem. The increased reflexes, the bilateral Babinski signs, and the unsustained ankle clonus, are upper motor neuron signs of pyramidal tract involvement. The patient had difficulty with point to point testing, dysmetria, and probably had much difficulty in walking. These cerebellar signs are a result of involvement of one or more of the cerebellar peduncles—the superior, middle or the inferior cerebellar peduncle running from the cerebellum to the brain stem.

"Since we have involvement of the VI, VII, IX, X nerves, the pyramidal tract, the reticular formation, and the cerebellum, I think that the lesion would have to be in the brain stem in the region of the pons and the medulla. The reflex of liquids through the nose was related to the IX and X cranial nerve palsy. Therefore we end up with what appears to be an infiltrative lesion of the brain stem that is not causing any block of the cerebro-spinal fluid through the aqueduct of the 4th ventricle. The only lesion that I know can involve this area of the brain stem to produce the

multiple and bilateral cranial nerve findings, the pyramidal tract involvement, reticular formation, and cerebellum without causing increased intracranial pressure is an infiltrative glioma of the brain stem."

CHEST AND SKULL FILMS

Dr. Robert A. Sloan: "A recumbent chest film was obtained on the day of admission and appears normal. Although I would think that from the protocol that the child would be a good candidate for aspiration pneumonitis, this is not present on this film three weeks prior to death. Routine skull films show no evidence of increased intracranial pressure or other pathology. Two pneumoencephalograms were attempted. In both instances air entered the cranial cavity but passed up over the cerebral hemispheres without significant filling of the ventricular system."

PATHOLOGIST'S REPORT

Dr. Joel G. Brunson: "This case lends itself well, as Dr. Tutor has pointed out, to a review of some of the principles of neuroanatomy with which everyone should be familiar. The child does have a tumor. It is pretty much in the location described by Dr. Tutor. It is in the area of the pons, which was quite remarkably enlarged, although the geometric shape was retained. This rather massive degree of enlargement of the pons extended down towards the medulla. On cut section, we were a little bit amazed to see the extensive amount of hemorrhage which was present in this tumor, since this impression was not really gained from looking at it from the outside. Although pearly white on section, there was about it fairly extensive tumorous growth which did contain hemorrhage.

"Like many tumors of the central nervous system, it was a little difficult to actually decide grossly, and I guess microscopically, how far it extended into the surrounding tissue of the brain. Microscopically, this was a tumor in which there was a little bit of pleomorphism but by and large most of the cells were about the same size, and most of them tended to have projections of cytoplasms that look a little bit fibrillar. In some areas the degree of vascularity was not very great, but in other sections there was a good deal of vascular proliferation. The same type of cell was present throughout the background of the tumor, so that it appears to fit into the category of astrocytoma. Because of the fairly evident degree of vascularity in many areas we would probably put this in the category of a grade II astrocytoma, although the degree of cellular pleomorphism is not very striking, and there aren't any giant cells. It does extend over into the cerebellum.

"So, in essence, this is a fairly straight forward case of an astrocytoma in a child in which the remainder of the postmortem examination was essentially nonrevealing. We were a little bit surprised that this patient did not develop aspiration pneumonia, but his lungs were very strikingly clear, both grossly and microscopically. I don't know why his liver was palpable, but there wasn't anything unusual about it in any respect. I just have one question: What about the possibilities of surgery in a case of this type?"

SURGICAL APPROACH

Dr. Tutor: "This lesion doesn't lend itself very well to operative approach because of its location. It is malignant by position if not by histology because you have to go down through a very vital area of the brain in order to expose it. This child apparently was beginning to get into a problem of increased intracranial pressure which does occur in many cases terminally but this is usually a very late thing. In a child of this age group the normal measurements from the posterior clinoid to the floor of the 4th ventricle should not exceed 3.5 cm. In brain stem gliomas this is greatly increased. This is pathognomonic of a brain stem infiltrative lesion and in this age group this is usually a brain stem glioma, specifically an astrocytoma. This lesion will infiltrate through the brain stem and pick off multiple and bilateral cranial nerves, involve the reticular formation, pyramidal tract, and cerebellar peduncles. This lesion is not amiable to surgery.

"We usually will make a diagnosis by clinical findings and findings on the contrast air study and then place the patient on x-ray therapy. As far as I know, there has never been a brain stem glioma that was cured with x-ray therapy, but x-ray therapy does seem to decrease the morbidity to the patient. It is interesting to remember that the peak instance of this brain stem glioma is age 5 as we found in this case. Also the average length of survival is three months as we had in this case so I think this turns out to be a very typical brain stem glioma."

PREDNISOLONE RATIONALE

Physician: "Dr. Tutor, what is the rationale for Prednisolone?"

Dr. Tutor: "I think that this was probably given with the thought that this child probably had

encephalitis. In neurosurgery we give steroids to patients who have cerebral edema to decrease the edema. We often give steroids during the postop period when we expect a lot of edema around the operative site. The patients seem to get along much better if they get 200 or 300 mg. of cortisone for a week or so postop until the edema subsides."

SIZE OF INVOLVEMENT

Dr. John A. Gronvall: "How big a lesion does it take in the reticular formation to induce this alteration in mental state? Could just a tiny segment be involved or does this mean that a fair amount of it is involved?"

Dr. Tutor: "I would think that it probably could be a very localized lesion that would produce severe depression of the conscious level."

Dr. Tutor: "In suspected brain stem gliomas we try to do what we call the limited pneumoencephalogram—just put in a small amount of air without taking out any spinal fluid so that we do not change the cerebral spinal fluid dynamics at all. We try to just feel the 4th ventricle and the aqueduct and not get air in the lateral ventricles of the brain or up over the surface of the brain because this air in the lateral ventricles will sometimes obscure the visualization of the 4th ventricle which is so important in the diagnosis of these lesions."

Dr. Gronvall: "Would you comment on the findings in the spinal fluid in a case like this. Why is the protein elevated and how does this help you?"

Dr. Tutor: "In brain tumors the spinal fluid protein is quite well correlated with the proximity of the tumor to the subarachnoid space. The tumor apparently deposits debris from the surface of the tumor into the spinal fluid which elevates the protein. Meningiomas that lay very near the subarachnoid space anywhere within the cranial cavity will usually elevate the spinal fluid protein. In this case I think that the rather mild elevation of the spinal fluid protein 63 mg. per cent was related to the presence of the tumor infiltrating the floor of the 4th ventricle and not to any block of the spinal fluid pathways."

Dr. Brunson: "Other questions? Thank you very much then." ★★★

2500 North State St.

MATRIARCHAL SUCCESSION

The patient was obviously suffering from delusions of grandeur, insisting that his name was Napoleon Bonaparte. The psychiatrist was accordingly careful to address him as "Mr. Bonaparte."

"You're mistaken, doctor," interrupted the patient. "My name isn't Bonaparte. It's Hamilton—Alexander Hamilton."

"Oh, I beg your pardon," replied the physician, "but I was sure that you told me your name was Bonaparte."

"Of course I did," agreed the patient, "but that was by my first wife, Josephine."

—James Ward in the *Jackson Daily News*

How Shall We Choose?

OMAR SIMMONS, M.D.
Newton, Mississippi

FOR BETTER OR WORSE, profound changes are taking place in the American system of medical care. Generally, these changes are related to the distribution of care, the circumstances under which it is rendered, and the character of facilities involved in its purveyal. A political revolution is rocking the structure of medicine, and we know after three decades that there is no longer a question of how the bill shall be paid, only one of who will do the paying.

But the most dramatic innovation is the dominant role of government, not merely in financing care but also as a decisive influence in the extent of quantity and as a factor of growing importance in quality determination.

At the moment, dependency upon government for support of medical research is primary. Medical facilities development and construction are largely government-determined matters. The day is at hand when one out of four Americans will receive care or care financing exclusively from governmental sources.

For many aspects of this revolution, we physicians must accept the credit or blame, because we have initiated some of the departures. Whether the bases of the change have merit or not, whether they are just or not, and whether they are prudent or not are all academic questions now. The change is inexorably taking place.

Medicine is now confronted not so much with a choice as it is with a challenge. We are neither the first nor the last to experience the chipping away of prerogatives. We are not unique in finding ourselves in a posture where society must have our services while it chooses to reject our status.

President, Mississippi State Medical Association, 1964-65.
Read before the House of Delegates, 97th Annual Session, Biloxi, May 10-13, 1965.

This is no discourse on the rise and fall of American medicine, nor is it a treatise on defeatism. Conversely, my thesis is one of challenge and hope, of optimism and promise, of duty and responsibility. We have found that it can happen here, that political judgment is subject to fallibility, and that we can no longer afford the luxury of living in a past which simply doesn't exist.

In the 1965 President's Address, Dr. Simmons states, "It is a curious paradox that the wealthiest nation in the history of the world can seriously believe that only government can furnish the means for distribution of a professional service when we own more television sets, more outboard motors, more automobiles, and have more savings and personal possessions than half the world." Dr. Simmons proposes a five point Declaration of Principle for American Medicine and a doctrine for American medicine in this new social and economic era.

The hour is at hand in which we physicians must redefine our aims and objectives and make our position so forcefully clear that no thinking individual can harbor a doubt as to what we intend to do and how we are going about doing it.

I propose a Declaration of Principle for American medicine which will also assert our concept of duty, responsibility, and obligation. If we can subscribe to this position, then we need have no reservation about still another from which physicians may have restrained themselves altogether too long: We must also seek our own interests in a moral, lawful, and enlightened manner.

In an oath first sworn more than 24 centuries

ago, Hippocrates committed himself deeply to strict duty. Moreover, he admonished the physician to "be an upright man, instructed in the art of healing, modest, sober, patient, prompt to do his whole duty without going so far as superstition, conducting himself with propriety in his profession and in all the actions of his life."

But nowhere is there recorded a Hippocratic injunction to compromise professional judgment. He purposely held steadfastly to professional prerogative. He made no concession of his art to the state, and by his silence, he reserved for the healer his freedom, which like all freedom, was purchased with responsibility.

FIVE PRINCIPLES

Thus, the first principle of my declaration is nothing new: We assure our services to all who need them, and we will never be witting or willing parties to withholding or withdrawing medical care from the sick, the injured, and those in the distress of pain.

What is new about this is that we physicians, having given this assurance and assumed this high obligation, shall make the decision as to how it shall be carried out. We reject out of hand the bargaining and selling of our professional attainment by the state or by any scheme or system which is bereft of our voluntarily given blessing.

Second, my declaration recognizes that society has the right to expect and require minimum professional qualification in individuals and institutions to whom care of the ill and injured is entrusted. In endorsing this right of society, I further proclaim our prerogative to make a pronouncement as to that competence, once we have met the criteria of qualification. I reject standards of professional attainment and quality levels generated by nonmedical sources to which an economic consideration has been attached as a condition precedent for governmental subsidy.

If medicine is not qualified to erect its quality minimums, then it must also be said that its scientific progress is blind serendipity and a happy accident of fortuitous circumstance. It is also to deny that the victories over the infectious diseases, the astonishing gains in surgery, the longer life, the chemotherapeutic armamentarium of miracles, and the death of disease by immunization ever happened.

Third and in keeping with the Principles of Medical Ethics, I reserve exclusively unto the healer the prerogative to choose whom he will treat, except, of course, in emergencies, when he is expected to do his best. But this reservation should be extended: The physician shall also choose the circumstances under which his services are made available. He cannot be expected to hand over this basic right of intangible property to the state, a scheme, or a system, thereby making of himself a ward and servant, bound to fritter away his skill and time in a maze of political medicine.

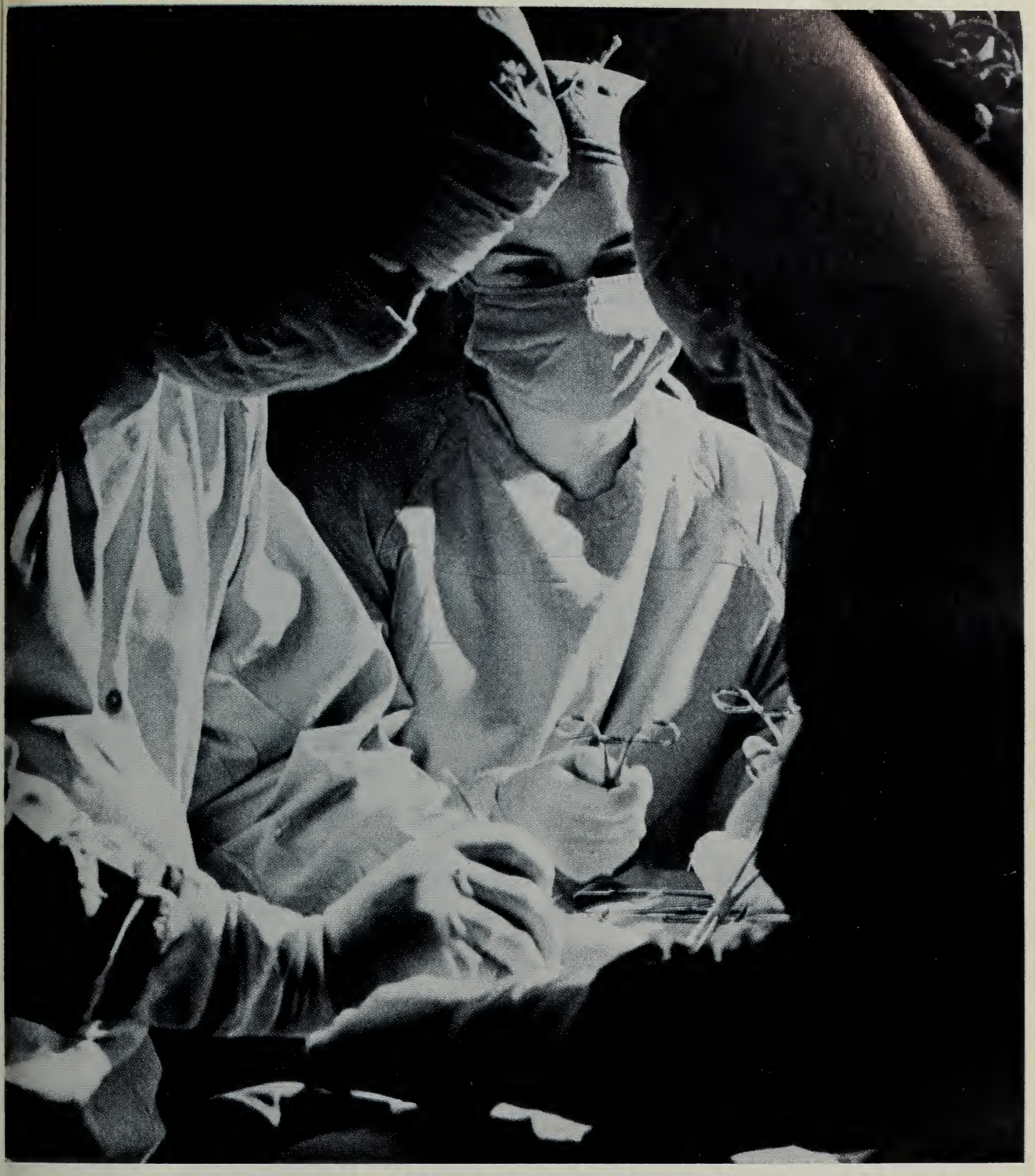
Fourth, the doctor must at all times be free to participate or not in systems of medical care, according to the dictates of his conscience and professional inclination. I defend this fundamental right for the physician who wishes to participate wholly in state medicine, just as I do for myself who do not. The right to choose is so basic, so organic in our way of being, and so inherent in the fundamentals and foundations upon which American society is structured as to make its assertion rhetorical. Perhaps some politicans have wrongly concluded that the M.D. diploma is also a warranty deed conveying skill, soul, and conscience to the state.

If this is true, then let them know this: The physician is no more and no less in right, privilege, and prerogative than any other American citizen in any other pursuit. He is distinguished only by his choice to undergo long and arduous training and to assume much greater moral and legal responsibility than most others. To that extent, he is unique. In all other respects, he refuses to be less equal than the tradesman, the businessman, and the politician.

Fifth, medicine is not a utility nor are its services in the public domain. It is an individual professional endeavor, sufficiently regulated by statute and case law within the several sovereign states. The responsibility and accountability of the practitioner for his professional acts are not at issue. Thus, the government's guaranteeing medical services as a matter of right is the final mockery of healing, because government cannot guarantee that which it does not have to give.

THE ULTIMATE INCURSION

This ultimate incursion is curiously compounded by the total lack of logic or necessity, because the availability of medical care can hardly be extended by supplanting public for private sponsorship. Indeed, the converse has been true in many European nations. To me, this raises serious questions as to the motives and sincerity of government scheme proponents.



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The significant pharmacologic actions of Lomotil are summarized as follows:

Evidence indicates that Lomotil acts directly on the intestinal musculature to inhibit excess peristalsis.

Lomotil is not known to inhibit nonpropulsive intestinal movements.

Roentgenograms demonstrate that this activity occurs within two hours after oral administration and persists for at least six hours.

Comparative studies in the rat show Lomotil to be more effective in inhibiting fecal excretion than either codeine or morphine.

Analgesic, anticholinergic, mydriatic and gastric secretory effects have not been significant.

Reduction of propulsive motility with Lomotil relieves spasm and cramping, allows physiologic absorption of fluid and reduces frequency of evacuations to provide prompt, symptomatic control of virtually all diarrheas.

LOMOTIL®

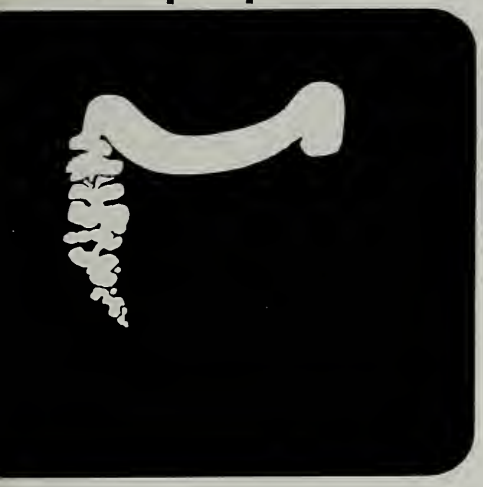
Each tablet and each 5 cc. of liquid contains:

diphenoxylate hydrochloride 2.5 mg.
(Warning: May be habit forming)

atropine sulfate 0.025 mg.

tablets • liquid

slows propulsion



relieves distress



stops diarrhea



Precautions: Lomotil is an exempt narcotic preparation of very low addictive potential: more than three million prescriptions have now been written for Lomotil. Recommended dosages should not be exceeded. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia.

Dosage: For full therapeutic effect—Rx full therapeutic dosage. The recommended initial daily dosages, *given in divided doses,* until diarrhea is controlled, are:

Children:

3 to 6 months—3 mg. (½ tsp.* t.i.d.)
6 to 12 months—4 mg. (½ tsp. q.i.d.)
1 to 2 years—5 mg. (½ tsp. 5 times daily)
2 to 5 years—6 mg. (1 tsp. t.i.d.)
5 to 8 years—8 mg. (1 tsp. q.i.d.)
8 to 12 years—10 mg. (1 tsp. 5 times daily)

Adults:

20 mg. (2 tsp. 5 times daily or
2 tablets 4 times daily)

**Based on 4 cc. per teaspoonful.*

Maintenance dosage may be as low as one fourth the therapeutic dose.

Lomotil is a brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of atropine is added to discourage deliberate overdosage.

SEARLE *Research in the Service of Medicine*



"All Registered Nurses are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards. Therefore, all registered nurses are alike.

That's nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all registered nurses aren't alike, either.



The length of accommodation to which medicine has gone in the past decade may have been too much. Whether this has been good or bad, wise or foolish is not now a matter for debate, because we cannot recall a line hitherto written. What we can and must do is to agree upon the point beyond which we refuse to go and defend this maximum with every legal and moral means at our disposal. No longer are these socioeconomic issues mere matters of desirability, no longer are they issues of feasibility, and no longer are they considerations of economic convenience. These are now matters of ultimate concern in survival, unless, of course, we are ready to hand over the last remaining prerogatives we possess, thereby establishing the absurd imbalance of responsibility without prerogative, duty without privilege, and obligation without choice.

SICKNESS OF SOCIETY

Not only is it difficult to find ourselves proclaiming these principles, but it is also distressing to be faced with the stark reality that the social and political climate of these United States warrants their proclamation. But we did not spawn this generation of politicians who have undertaken the task of supplying not just government with the consent of the governed but the necessities and amenities of life as well. Our skills are not such that we can treat this sickness of society, but our determination as healers can be such as to preserve our profession.

Let none mistakenly say that we threaten when we seek only the reasonable and attainable. Were we motivated solely by self-interest to the exclusion of moral and professional obligation, then the solution would be simple: We would merely clothe ourselves in the protection of labor law, select our representatives, and have these matters out at the bargaining table and in the courts.

MORE THAN A TRADE

But medicine is more than a trade or a craft. It is more than a skill and a body of scientific knowledge. It is a commitment with a depth clearly appreciated by its disciples who understand the coming and going of life itself. Within this frame of reference, I do not conceive that this professional association elects these to places of leadership to preside over the liquidation of its commitments and principles.

While we admonish others not to commit errors of miscalculation as to our intentions, we can also direct admonitions at ourselves. At this moment, these declarations are ideas, not deeds. I am not so presumptive or naive as to think that any single individual is competent to chart a final course for the profession of medicine. At best, we can each contribute our thinking for assist by constructive deliberation and debate.

MEDICINE'S WILLING ROLE

If ever there is a clear policy in these several connections, it will be brought into being only after the most sober and mature consideration by the 54 state and territorial associations and the American Medical Association. Only from this broad and inclusive genesis can a policy emerge which fairly and honestly portrays the depth and extent, the scope and degree, and the length and breadth of American medicine's willing role in this new social and economic era. Toward this end, I offer you a doctrine which I hope is found useful as a point of departure:

The profession of medicine, in keeping with its historic traditions and commitments, assures its services to all in need of medical care. In voluntarily assuming this responsibility and giving this assurance, physicians reserve to themselves the rights of property they have lawfully acquired through training and licensure. These may not be bartered or sold, conveyed or guaranteed without the willing consent of the practitioner who shall remain free to decide for himself the circumstances under which his professional services are rendered.

A CURIOUS PARADOX

We do not invite a test of our determination nor do we conceive that a test is even necessary. Almost nowhere in the world is quality medical care more widely and easily accessible than it is in these United States. If anything, it is a curious paradox that the wealthiest nation in the history of the world can seriously believe that only government can furnish the means for distribution of a professional service when we own more television sets, more outboard motors, more automobiles, and have more savings and personal possessions than half the world.

But we must decide how far we shall go and how much a party we shall be to this new order of economics which seems to assume that the most productive people on earth are entirely capable of generating the most per capita wealth and least able to make prudent disposition of it.

I offer you this challenge, this declaration, and this doctrine, asking you as doctors—what will you do with them? ★★★

Radiologic Seminar XXXIX: Achalasia

W. M. FLOWERS, JR., M.D.
Jackson, Mississippi

ACHALASIA, FIRST DESCRIBED by Thomas Willis in 1672, is currently thought to represent disease of the myenteric plexus of the lower esophagus, with the basic functional defect being the inability of the distal esophagus to relax. The term achalasia literally means absence of relaxation. Due to the persistent contraction of the distal esophagus, emptying is impaired, food and fluid are retained, and the proximal esophagus becomes remarkably dilated and redundant.

Achalasia affects all ages and both sexes. Its course is usually chronic, with intermittent dysphagia progressive over months to years. Regurgitation frequently occurs in the recumbent position, and may occur at night when the patient is asleep. Pain is a frequent complaint. Weight loss and nutritional disorders may complicate the clinical picture, and symptoms secondary to aspiration pneumonitis may be a prominent feature.

The initial standard chest films frequently detect the abnormality and suggest the diagnosis. The usually inconspicuous thoracic esophagus becomes a prominent mediastinal structure. It may be responsible for only a subtle double contour along the right heart border, but pronounced mediastinal widening may require differentiation from neoplastic disease and other serious mediastinal abnormalities. The esophagus is likely to contain a remarkable amount of fluid. On the upright chest film, an air-fluid level within the dilated esophagus is often a convincing radiographic finding. Bilateral acute and chronic pulmonary parenchymal changes secondary to aspiration pneumonitis, and absence of the usual gastric air bubble are well-known associated radiographic findings.

Sponsored by Mississippi Radiological Society.
From the Department of Radiology, University of Mississippi School of Medicine.

Contrast examination with barium will usually establish the diagnosis beyond a reasonable doubt. Characteristic conical tapering is present just proximal to the esophago-gastric junction (Figure 1). Marked restriction of emptying is noted, though delayed passage of barium in small amounts is the rule. The thoracic esophagus proximal to the lesion is usually distended to a degree seen with no other disease. If fluid in the esophagus has not been evacuated prior to the study, barium sinks through the contained fluid in a characteristic manner.

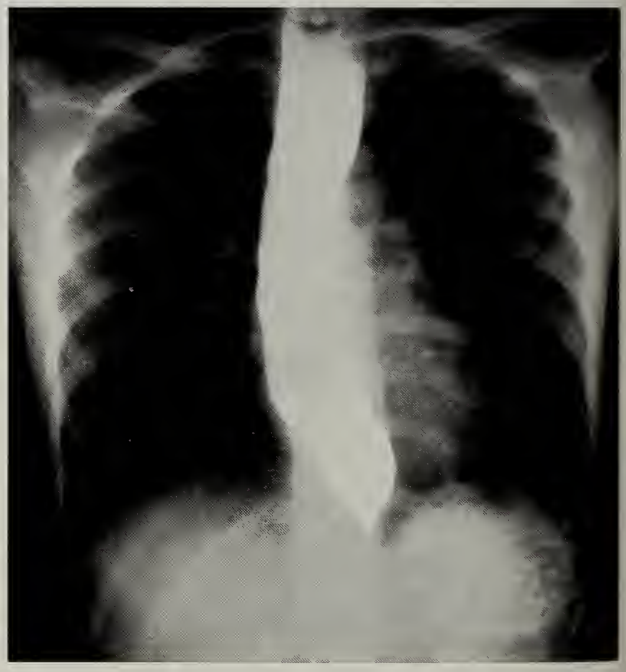


Figure 1. A barium swallow film, revealing considerable dilatation of the entire thoracic esophagus, as well as the classical conical tapering just above the esophago-gastric junction (retouched for purposes of illustration).

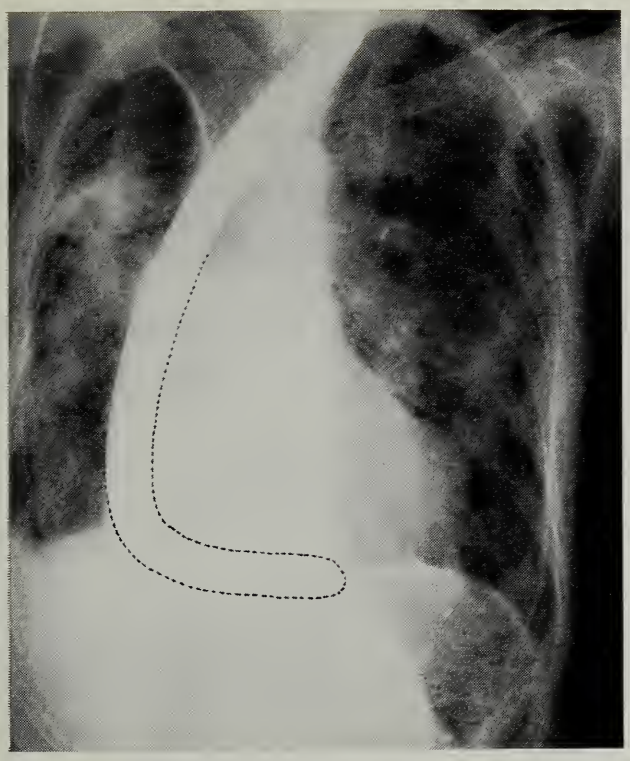


Figure 2. In this instance, the bougie was passed blindly, and clinically the position was believed adequate. However, the film revealed the tip to lie proximal to the esophago-gastric junction, indicating no effective dilatation of the narrowed area (retouched for purposes of illustration).

A comprehensive discussion of treatment is beyond the scope of this paper. However, a reasonable program might proceed as follows: First, bougienage alone will relieve some of the patients with achalasia. The remainder will need pneumatic dilatation, and it may be necessary to repeat this several times. Refractory patients should be considered for surgery, with the Heller operation being the most widely accepted procedure.

Radiographic and fluoroscopic control of mechanical and pneumatic dilatation is recommended in order to be sure that the dilator is in the proper position (Figures 2 & 3).

Following successful treatment, there may be a significant reduction in the size of the esophagus with considerable improvement in the patient's ability to swallow, but radiographically, the esophagus rarely returns to a completely normal pattern. ★★★

2500 North State St.

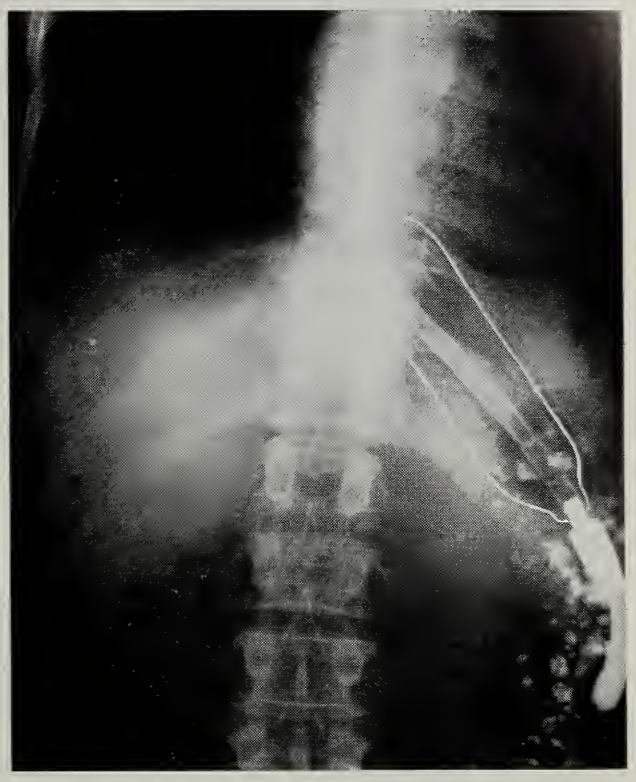


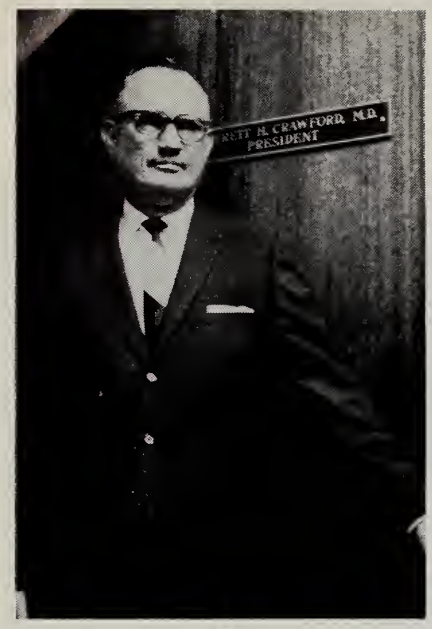
Figure 3. In this instance a pneumatic dilator was passed under fluoroscopic control, and when it had been properly placed in the esophago-gastric junction the balloon was inflated with air. This film demonstrated the correct positioning of the tube and the degree of dilatation achieved (retouched for purposes of illustration).

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3. Kay, E. B.: Observations as to the Etiology and Treatment of Achalasia of the Esophagus, J. Thoracic Surg. 22:254-265 (September) 1951.

AGELESS ADMONITION

The doctor finally discovered a sure-fire means of making his careless wife drive carefully: He pointed out that if she had an accident, the newspapers would print her age.



The President Speaking

'A Positive Step'

EVERETT CRAWFORD, M.D.
Tylertown, Mississippi

THE TRAGIC CARNAGE on America's highways, so horribly emphasized by national holidays, demands the urgent attention of every citizen. Physicians have a well-defined responsibility in this respect, because only doctors of medicine can assume leadership in the development of sound medical criteria for the licensing of automobile drivers. Our association is meeting this responsibility through a new program of driver limitation.

Historically, Mississippi physicians have expressed concern over motor vehicle fatalities in a variety of ways. We have addressed ourselves to traumatic injury in automobile accidents in the sense of care. The association has participated in the Cornell University Automotive Crash Injury Research project in studying injury producing phenomena with a view toward building safety into automobiles. But the crucial quantity in the accident equation is the driver, and we must recognize that in some instances, he is neither physically nor mentally fit to operate a vehicle safely.

Working with the Mississippi Department of Public Safety, the Board of Trustees devised a program of driver limitation on medical criteria. It was developed by a splendid committee which has opened a new field of opportunity in accident prevention. The Board and its committee immediately recognized that it would be a waste of medical manpower to undertake examination of all of the nation's 91 million licensed drivers. At the same time, there are stated circumstances where medical examination is imperative.

Our program includes referral of such a license applicant to his private, personal physician for examination. The doctor is neither required nor asked to make a determination as to whether the applicant is qualified to drive; he merely reports his medical findings to the Department of Public Safety. Our committee assists the department, when necessary, in an advisory role. In approving this program, our House of Delegates took a positive step in making the highways safer and sparing some Mississippians from a tragic death. ★★★

Constitution and By-Laws of the Mississippi State Medical Association

CONSTITUTION

Preamble

That more may live longer in the richness and comfort of health; that pain, suffering, and disease may be eradicated to the extent made possible by scientific medical knowledge; that the standards of the medical profession may be maintained on the highest plane of honor, we dedicate ourselves as physicians through this Association. Among us, membership is a privilege, earned by professional qualification, personal honor, and selfless service; it is not a right vested superficially nor by statutory licensure. Truth shall be our quest; diligence, our staff; and service, our purpose.

Article I
NAME OF THE ASSOCIATION

The name and title of this Association shall be the Mississippi State Medical Association.

Article II
PURPOSE OF ORGANIZATION

The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Mississippi and to unite with similar associations in other states to form the American Medical Association, with a view toward the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws, to the promotion of friendly intercourse among the physicians and to guarding and fostering of their opinion in regard to the great problems of medicine, so that the profession shall become more honorable and capable within itself, and more useful to the public in the prevention and care of disease, and in the prolonging of and adding comfort to life.

The purpose of this Association shall be to promote scientific medical research and practice and shall be a non-profit organization.

Article III
COMPONENT SOCIETIES

Component Societies shall consist of those societies which hold charters from the Association.

Article IV
MEMBERSHIP

Section 1. Members of the Mississippi State Medical Association. Members shall be active, associate, emeritus, or scientific, according to requirements and provisions of the By-Laws. There may also be invited guests. All degrees of membership other than associate and scientific shall be construed as active in connection with the rights and privileges accruing therefrom.

Section 2. Guests. Any physician not a resident of the state may become a guest during any annual session upon invitation of a member of the Association, and shall be accorded the privilege of participating in all the scientific work of that session.

Article V
SESSIONS AND MEETINGS

Section 1. The Association shall hold an annual session during which there shall be held daily not less than two general meetings, which shall be open to all registered members and guests.

Section 2. The time and place for holding the annual session shall be fixed by the House of Delegates, but in emergencies, the Board of Trustees shall have the power to fix, or change, either the time or the place, or both of the annual session.

Article VI
GENERAL OFFICERS

Section 1. The general officers of this Association shall be a President, President-elect, three Vice-Presidents, one from each Supreme Court District, Secretary-Treasurer, Speaker, Vice Speaker, and Editor.

Section 2. The President, President-elect, and Vice-Presidents shall hold terms of one year. The Secretary-Treasurer, Speaker, Vice Speaker and Editor shall be elected for terms of three years.

Section 3. The officers of this Association shall be elected by the House of Delegates on the last day of the annual session following the adjournment of the general meeting, but no person shall be elected to any such office who has failed to attend two-thirds of the past two and current annual sessions and who has not been a member for the past two years.

Section 4. In addition to these general officers, there shall be an Executive Secretary who need not be a physician or member of the Association. He shall be appointed by the Board of Trustees and shall serve at the pleasure of the Association. His compensation and expenses for duties performed shall be fixed by the Board of Trustees and confirmed by the House of Delegates.

Article VII
EXECUTIVE OR CENTRAL OFFICES

The Executive Secretary shall maintain in the city of Jackson suitable offices for the discharge of his duties and for conducting the administrative affairs of the Association.

Article VIII
HOUSE OF DELEGATES

The House of Delegates shall be the legislative, business, and policy-making body of the Association and shall consist of (1) delegates selected by the component societies under authorized apportionment, (2) the general officers of the Association, (3) all past presidents, provided they still be members in good standing of the Association, (4) members of the Board of Trustees and Councils, and (5) elected committees, Delegates and Alternate Delegates to the American Medical Association, members of the State Board of Health, and members of the Board of Trustees of Mental Institutions, all of whom must be members of this Association.

Article IX
BOARD OF TRUSTEES

The Board of Trustees shall be the executive and governing body of the Association during vacation of the House of Delegates and shall perform such duties as are prescribed by law governing directors of corporations and in the By-Laws of the Association. The Board shall consist of nine members, one from each Association District, elected for terms of three years each. A Trustee shall not serve more than three consecutive terms.

Article X
FUNDS AND EXPENSES

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by annual dues, per capita assessments upon the membership, and by voluntary contributions. Funds may be appropriated by the House of Delegates to defray the expenses of the annual session, publications, and for any other purpose approved by the House of Delegates.

Article XI
THE SEAL

The Association shall have a common Seal with power to break, change or renew the same at pleasure.

Article XII
AMENDMENTS

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at the annual session, provided that such amendment shall have been presented in open meeting at the previous annual session, and that it shall have been sent officially to each component society at least two months before the session at which final action is taken.

BY-LAWS

Chapter I
MEMBERSHIP

Section 1. Eligibility. Each component society of the Mississippi State Medical Association shall judge the qualifications of candidates for election to membership therein, which shall be restricted to those persons who hold the degree of Doctor of Medicine from an appropriately accredited source as defined by the American Medical Association, or in lieu thereof, a foreign degree in medicine which is an acceptable equivalent to the Board of Trustees and shall be a citizen of the United States. All candidates for any degree of membership other than associate must be legally licensed to practice medicine in Mississippi. Persons who obtained this degree prior to January 1, 1917, need not comply with this requirement but must be licensed to practice medicine in Mississippi or, if offering to practice in Mississippi must be eligible for license by reciprocity and be a member in good standing of a constituent (state) association of the American Medical Association. Membership in a component society, evidenced by the payment of dues for the current year, shall be a prerequisite to membership in the Association, except that a physician upon his initial application for membership in a component society of the Association shall be required to undergo a waiting period of ninety (90) consecutive days from the date he begins the practice of medicine in the geographical area of the component society before he may be elected to membership in the component society. No physician shall be eligible for membership who has been convicted of or who has plead guilty to either a felony or a violation of a state or federal narcotics law. The duly certified court record shall be *prima facie* evidence of pleas and convictions and cause automatic revocation of membership. No physician shall be eligible for election to or continuation of membership who does not possess a currently effective federal narcotics stamp, provided, however, that physicians in full time government service who need no registration to use, prescribe, and dispense narcotic drugs and those who, by reason of type of practice, employment, inactivity, or retirement, neither prescribe nor dispense narcotics and who for this reason alone have not applied for registration shall be exempt from this requirement.

Section 2 (a). Good Standing. Only those members in good standing shall be entitled to the rights and privileges of membership. A physician not in good standing may not be elected to office nor exercise the privilege of voting or attending any session of this Association, scientific or otherwise. The name of a physician upon the properly certified roster of a component society which has paid its annual assessment shall be *prima facie* evidence of his right to register at the annual session of the Mississippi State Medical Association. No member shall participate in any of the proceedings of the annual session until he is duly registered. No delegate or other member shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section. (b) Change of State Residence. In the event that a member moves from the State, his membership shall continue until, and lapse at the end of, the current fiscal year, but this provision shall not operate to prevent a physician who moves from the state continuing his membership by payment of all dues and assessments to the state Association. (c) Obligations of Membership. When the Executive Secretary of the Mississippi State Medical Association is officially informed by the secretary of a component society that a physician is not in good standing in the component society, he shall remove the name of the physician from the rolls of the Association. A member shall hold his membership through the component society in the jurisdiction of which he practices, provided that a physician living on or near a county line may hold membership in the society most convenient for him to attend. If the society in which he chooses to secure membership does not exercise jurisdiction over the area of his residence, then permission must be obtained from the jurisdiction society to facilitate his affiliation with the extra-jurisdiction society.

Section 3. Degrees of Membership. Members of the Mississippi State Medical Association shall be divided into the following classifications: Active, emeritus, associate, and scientific. (a) Active Membership. Active members shall include all eligible members of component societies in good standing, providing that all dues and assessments in this Association as may be hereinafter prescribed have been received by the Association. (b) Emeritus Members. Any member of the Mississippi State Medical Association who has been an active member for any ten consecutive years and shall have permanently retired from the practice of medicine shall be eligible for election to emeritus membership. Election to emeritus membership for reason of retirement in the case of permanent and total disability shall merit special consideration but shall be subject to ruling by the Board of Trustees. Election to emeritus membership shall be based on the recommendation of the component society and the approval of the Board of Trustees. (c) Associate Membership. Any commissioned medical officer in the United States Army, United States Air Force, United States Navy, or United States Public Health Service, or any physician in the employ of the Veterans Administration, not licensed to practice in the State of Mississippi, stationed in Mississippi, members of medical faculties of medical schools in Mississippi, approved by

the American Medical Association, who are not licensed to practice in the state, any hospital intern, or any hospital resident in Mississippi, may, on election to associate membership by the component society in whose jurisdiction the physician resides become an associate of the Mississippi State Medical Association. Associate members shall not vote or hold office. (d) Scientific Membership. Physicians meeting the professional qualifications set forth in Chapter I, Section 1, may be elected scientific members by component societies. The rights and privileges of scientific membership shall be limited to participation in the scientific work of the association and such members shall not vote or hold office. Scientific members shall pay no dues to component societies or the state Association. In addition to these provisions, the privileges of scientific membership shall be subject to rulings of the Board of Trustees.

Section 4. Dues and Assessments. A per capita assessment determined by the House of Delegates shall constitute the dues of the Association, which assessment shall be collected from all active members by the respective secretaries of the component societies, provided that new members shall be accepted on payment of three-fourths of annual dues after May 1 and one-half of annual dues after September 1. Each active member shall pay the prescribed dues to the officer designated by the component society for transmittal to the Executive Secretary of the Association. Dues shall include a subscription to the official publication of the Association. (a) Members Excused From Payment. The Board of Trustees may, by majority vote, excuse a member from payment of dues because of undue hardship or similar circumstances warranting special consideration provided that the component society shall have excused in full the payment of dues for periods exceeding one year. Such circumstances shall be interpreted to include extended illness and temporary disability. (b) Emeritus Members. Physicians who have been elected emeritus members shall not be required to pay dues in the Association. (c) Payment of Dues and Delinquency. Dues of the Association are due and payable on December 31 of the year prior to that for which dues are prescribed. Failure to pay dues by April 1 of the year for which due shall result in forfeiture of membership privileges and the removal of the member's name from the rolls of the Association. A five dollar ($5.00) reinstatement cost shall be assessed against any member who is delinquent by reason of non-payment of dues after April 1 of the year for which dues are payable. A member in good standing who is called to active duty with the Armed Forces of the United States other than in the regular component shall be carried as an active member without payment of dues until such time as he is released from military service; receipt of publications of the Association during such period shall be at the expense of the member.

Section 5. American Medical Association. Members of this Association shall pay the dues or hold a legal exemption from the dues of the American Medical Association. These dues shall be paid through the component society to the Executive Secretary of the Mississippi State Medical Association, whose duty it shall be to transmit them to the American Medical Association and to obtain proper credits and receipts therefor.

Section 6. Revocation of Emeritus or Associate Membership. Any emeritus or associate membership may be revoked by two-thirds vote of the House of Delegates when, in the opinion of the House of Delegates, the conduct or actions of the emeritus or associate member violates any of the principles of the code of ethics or whose conduct or actions are not becoming to the honor conferred.

Chapter II
ANNUAL AND SPECIAL SESSIONS

Section 1. Time and Place. An annual session shall be held as required by Article V, Section 1, the Constitution of the Mississippi State Medical Association, which session shall in any event be held prior to the annual session of the American Medical Association. The place of the state session shall be fixed in accordance with Article V, Section 2, the Constitution of the Mississippi State Medical Association.

Section 2. Special Session. A special session of the Association or of the House of Delegates may be called by the President, with the approval of the Board of Trustees. The Board of Trustees is empowered to call a special session by majority concurrence.

Section 3. Inviting an Annual Session. A component society desiring the Association and House of Delegates to meet in annual session in a city within its jurisdiction may submit an invitation in writing or verbally through its representative to the House of Delegates at the annual session concerned with the selection of the site for the next regular scheduled meeting. The dates and site of the annual session selected may be changed by majority vote of the Board of Trustees in an emergency requiring such a change.

Section 4. Registration Privileges. Only the following shall be permitted to register at any session:

(a) Active members
(b) Emeritus members
(c) Associate members
(d) Invited guests
(e) Medical students of American Medical Association approved medical schools who are certified to the Executive Secretary of the Association by their respective deans.
(f) Interns and residents who are graduates of American Medical Association approved medical schools and who are connected with an approved hospital and who are certified to the Executive Secretary of the Association by their respective hospital superintendents in event they are not associate members of the Association.
(g) Commissioned medical officers of the United States Armed Forces who are on active duty and who if not associate members are certified to the Executive Secretary by their Post or Base Surgeons or Commanding Officers.
(h) Scientific members.

Section 5. Indebtedness. A member shall not be permitted to register unless all current indebtedness to both the Association and component of proper jurisdiction has been paid.

Section 6. Admittance. Admittance to any meeting of the House of Delegates, any scientific section, or any of the various exhibits at an annual session of the Association shall be limited to members in good standing, duly registered and invited guests, members in good standing of the Woman's Auxiliary to the Mississippi State Medical Association, duly accredited and registered members of the Press, and accredited technical and scientific exhibitors.

Chapter III
GENERAL MEETING

Section 1. Participation. The general meeting shall include all registered members and guests, who shall have equal rights to participate in the proceedings and discussions, but no member shall vote on any question coming before a section of the general meeting except those who have registered as members of such sections. Each section of the general meeting shall be presided over by its chairman. The address of the President and the Distinguished Service Oration shall be delivered before the general meeting at such time and place as may be arranged.

Section 2. Order. The order of exercise, papers, and discussions as set forth in the official program shall be followed from day to day until it has been completed. But no section shall be allowed to place more than five papers on its program, nor more than two invited guest essayists (out-of-state or non-member). When a section

program is not completed within the time assigned, it shall not be allowed to continue into that assigned to another section.

Section 3. Time Restrictions. No address or paper before the Association, except those of the President and Orator, shall occupy more than twenty minutes in its delivery, except that guests may be allowed thirty minutes; and in formal discussion no one shall speak more than five minutes; and in informal discussion no one shall speak more than three minutes and not more than one time.

Section 4. Essayists. With the exception of the invited guests, the essayists must be members of the Association. No name shall appear more than once on the printed program to discuss a paper before the regular scientific sections unless such person qualifies for membership as provided in these By-Laws.

Section 5. Papers. All papers read before the Association shall be its property. Each paper must be read by its author, and must be deposited with the Secretary when read.

Section 6. Failure to Read Paper. No author listed on the program who fails to read a paper at the session may be allowed a place on the program of the next annual session, but if the author, being unable to attend, shows his good intent by forwarding his paper to the Secretary before the annual session, he shall not suffer the penalty.

Chapter IV
SCIENTIFIC SECTIONS

Section 1. Designation of Sections. The scientific sections of the Association shall be as follows: (a) Section on Medicine, (b) Section on Surgery, (c) Section on Preventive Medicine, (d) Section on Eye, Ear, Nose and Throat, (e) Section on Pediatrics, (f) Section on Obstetrics and Gynecology, and (g) Section on General Practice.

Section 2. Section Officers. Each scientific section of the Association shall, as the last order of business during its regular meeting, elect a chairman and secretary who shall serve for a period of one year. A majority of votes cast shall be necessary to elect.

Section 3. Program. The Council on Scientific Assembly shall place any paper in its proper section. The Council shall so arrange the program that no one section shall be given precedence over others two years in succession.

Chapter V
HOUSE OF DELEGATES

Section 1. Apportionment and Representation. Each organized county shall be entitled to representation in all regular and special sessions of the House of Delegates, one delegate and one alternate for each fifty members in the county and one delegate and one alternate for each fraction thereof, but each organized county holding a charter from this organization having made its annual report and paid its assessments, as provided in this Constitution and By-Laws shall be entitled to at least one delegate and alternate, said alternate delegates to act only in the absence of the delegate or delegates from the respective counties. No county in a component society shall be without representation in the House of Delegates; each shall be entitled to one delegate and one alternate without regard to total membership. No alternate may be seated at any regular or special session of the House of Delegates unless the delegates elected from that county shall be absent or otherwise unable to participate in the proceedings. In the event that neither the delegate nor the alternate is able to attend the regular or special session to which they have been accredited, then any *bona fide* resident of the county may, if properly registered, qualify himself as a delegate. No representative of the component society shall be seated in the House of Delegates until all his dues, assessments, and obligations to the component society have been paid. Delegates and alternates shall be elected by their respective component societies for terms of not less than two years and shall assume office on the first day of the annual session following their elections; they shall be *bona fide* residents of the counties which they represent. Their names shall be reported to the Central Office of the Association not later than thirty days prior to the first day of the annual session. Representatives of component societies shall be seated in the House of Delegates only following their proper registration of credentials from the component societies they represent.

Section 2. Meetings and Attendance. The House of Delegates shall meet annually on the first day of the annual session of the Association. The House of Delegates shall meet for the conclusion of business on the last day of the annual session immediately following the adjournment of the last general or scientific session, provided that these requirements shall not operate to prevent such other meetings of the House of Delegates during the annual session as the House itself may order or the President or Speaker may deem necessary, but no such meetings may be called at times which would conflict with the scheduled general or scientific session. Duly registered members and guests may attend all meetings of the House of Delegates provided that they occupy a distinctly separate section of the meeting hall or auditorium and further provided that they shall not be permitted to participate in any phase of the meeting of the House of Delegates except on invitation of that body. By majority vote, the House of Delegates may enter into executive session, during which time only qualified delegates and officers of the Association may remain in attendance.

Section 3. Quorum. A three-fifths majority of registered and duly seated delegates of this Association shall constitute a quorum.

Section 4. Order of Business. The order of business shall be conducted at the pleasure of the House of Delegates, provided it shall not be in conflict with either these By-Laws or the Constitution. Meetings shall be conducted according to *Robert's Rules of Order, Revised,* and within the bounds of courtesy and this Constitution and By-Laws. Generally, the order of business shall be:

(1) Adoption of the Transactions of the previous meeting.
(2) Reports of Boards, Councils and Committees.
(3) Reports of Presidential Committees.
(4) Special Orders.
(5) Unfinished Business.
(6) New Business.

Section 5. Memorials and Resolutions. No memorials or resolutions shall at any time be issued in the name of the Mississippi State Medical Association by any officer or member thereof until such memorial or resolution has been approved and adopted by the House of Delegates or Board of Trustees.

Section 6. Duties and Responsibilities. It shall, through its officers and otherwise, give diligent attention to foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping stone to future ones of higher interest. It shall consider and advise the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation and to diffuse popular information in relation thereto. It shall make careful inquiry into the condition of the profession of each county in the state, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in the counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality, and shall continue these efforts until every

physician in every county in the state has been brought under medical society influence. It shall encourage post-graduate work in medical centers, as well as home study and research, and shall endeavor to have the results utilized and intelligently discussed in the component societies. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body, the term of office to begin on January 1 of the year following that of the elections and continuing for two successive years. It shall, upon recommendation of the Board of Trustees, provide and issue charters to counties organized to conform to the spirit of the Constitution and By-Laws.

Section 7. Reference Committees. Business brought before the House of Delegates will normally be referred by the Speaker for hearing, debate, and recommendation to a reference committee. Sufficient reference committees shall be appointed by the President to expedite and assist in the deliberations of the House of Delegates. Such committees shall consist of not less than three nor more than five members, all of whom shall be members of the House of Delegates, who shall serve only during the regular or special session for which appointed. Any member of the Association shall have the privilege of appearing before a reference committee on any issue being considered. Additionally, reference committees may permit the appearance of any individual who, in the opinion of the committee, can assist its deliberations.

Chapter VI
ELECTION OF OFFICERS

Section 1. Ballot. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect.

Section 2. Nominations. The House of Delegates on the first day of the annual session shall select a Committee on Nominations consisting of nine members of the House of Delegates, one from each Association District. It shall be the duty of this committee to consult with the members of the Association and to hold one or more meetings at which the best interests of the Association and of the profession of the state for the ensuing year shall be carefully considered. The committee shall nominate to the House of Delegates three names for each general officer vacancy and two names for all other offices. No two candidates for President-elect may be named from the same county. Nominations for appointment to membership on the Mississippi State Board of Health shall be made by the House of Delegates in accordance with Section 7024, Mississippi Code of 1942, provided that six names shall be submitted, three of whom shall be elected and their names submitted to the Governor as nominees from each district, provided no member shall be nominated who has served two consecutive terms. The House of Delegates shall nominate five physicians when vacancies occur on the Board of Trustees of Mental Institutions which nominations shall be submitted to the Governor in accordance with law.

Section 3. Report of Nominations. The House of Delegates shall receive the report of the Committee on Nominations and elect officers, Trustees, and Council members on the last day of the annual session.

Section 4. Nominations from the Floor. Nothing in this Chapter shall be construed to prevent additional nominations being made from the floor by members of the House of Delegates.

Section 5. Executive Secretary. The Board of Trustees shall select and appoint an Executive Secretary as elsewhere prescribed in the Constitution and By-Laws of the Association.

Chapter VII
DUTIES OF OFFICERS

Section 1. President. The President shall have general supervision over all meetings of the various bodies of the Association, shall appoint all committees not otherwise provided for, shall deliver an annual address at such time and place as may be arranged, and shall perform such other duties as custom and parliamentary usage may require. He shall fill by appointment all vacancies occurring during his tenure of office among the general officers and on the Board of Trustees and Councils and shall be empowered to appoint such committees on an *ad hoc* basis as may be desired or required to conduct the affairs of the Association. He shall be an *ex officio* member of all Councils and committees. He shall be the real and acknowledged head, as well as the personal representative, of the medical profession of the State of Mississippi during his term of office, and insofar as practicable, shall visit by appointment the various sections of the state and the component societies of the Mississippi State Medical Association and assist the Trustees in their tasks of aiding and strengthening the component societies and in making their work more useful.

Section 2. President-elect. The President-elect shall be in charge of the work of organization, including membership, under the direction of the President, and shall exercise these duties and advise with the Vice Presidents and with the Board of Trustees in this phase of their activity. He shall be an *ex-officio* member of all Councils and committees. He shall succeed to the presidency upon the event of the death, resignation, or removal from office of the President. This automatic succession shall not operate to disqualify him from serving the next regular term of office unless he has served more than six months as President.

Section 3. Vice Presidents. The Vice Presidents shall assist the President in the discharge of his duties. They shall further assist the President-elect in the work of organization, including membership in their respective areas, and in promoting the welfare of the Association and the profession of the state.

Section 4. Speaker. A Speaker shall be elected for a term of three years. This officer may be chosen from the membership of the Association, irrespective of any affiliation with the House. The Speaker shall familiarize himself with the rules and usages of parliamentary procedure, with the laws of the House. On him shall devolve the duty of bringing before the House through the various officers and chairmen all reports and other matters that are to receive its attention. He shall preside at all meetings of the House and perform the duties usual to the position and office of chairman except in the appointment of committees, which shall be the privilege of the President.

Section 5. Vice Speaker. A Vice Speaker shall be elected for a term of three years to run concurrently with that of the Speaker. The Vice Speaker shall assist the Speaker in all duties prescribed in these By-Laws.

Section 6. Secretary-Treasurer. The Secretary-Treasurer shall be elected for a term of three years. He shall perform such duties ordinarily devolving on a secretary of a corporation by law, custom, or parliamentary usage and shall enjoy the rights and perform such other duties as may be granted or imposed in the Constitution and these By-Laws. He may delegate such duties as are herein described to the Executive Secretary who shall be responsible therefor. He shall be an *ex-officio* member of all Councils and committees.

Section 7. Executive Secretary. The Executive Secretary shall be appointed by the Board of Trustees and shall serve at the pleasure of the Association. He need not be a member of the Association nor a physician. He shall maintain a Central Office for the Association and shall be responsible for the management and proper functioning of the Central Office to the President of the Association and the Board of Trustees. He shall attend all sessions and meetings of the Association, the House of Delegates, the Board of Trustees, and shall serve at all times to perform such other duties as may be deemed beneficial to the Association by the President and Board of Trustees. He shall assist elected officers, Councils, committees, and

Trustees in the performance of their duties. Under instructions from the President, he shall conduct a comprehensive program of public education and all such other activities as may disclose favorably to the public at large the aims, objectives, and goals of service of the medical profession in Mississippi. He shall, when requested, place himself in position to assist any of the component societies of the Association and he shall attend meetings of the component societies when invited by officers thereof. He shall be made custodian of records, books and papers belonging to the Association and he shall keep account of and promptly place under the supervision of the Secretary-Treasurer such funds as may be delivered into his hands in the name of the Association. He shall give bond at the expense of the Association in such amount as may be required. He shall provide for the registration of the members and delegates at the annual session and cooperate in preparing for and arranging all functions of the Association, including the annual session. He shall procure an exact transcript of all proceedings of the House of Delegates. He shall maintain a register of all legal practitioners in Mississippi and he shall maintain detailed and exact records of the membership with regard to component societies, the Mississippi State Medical Association, and the American Medical Association. He shall issue evidence of membership to each physician who pays the annual assessment and is accepted in the Mississippi State Medical Association. He shall maintain close and complete liaison with the American Medical Association and shall keep the component societies informed of activities, programs, and mandates of both the state Association and the American Medical Association. He shall publish from the Central Office such memoranda, bulletins, and miscellaneous publications as may be directed by the President, the Board of Trustees, and the House of Delegates. He shall conduct the official correspondence of the Association as he may be directed. He shall employ such assistants as may be required, upon authorization of the Board of Trustees. He shall supply each component society with blank forms to be used in connection with membership and reports. He shall maintain records of monies paid by the component societies for assessments and dues. He shall prepare and publish under the direction of the President and Board of Trustees such programs as may be necessary for official functions of the Association. He shall be reimbursed for expenses incurred in the performance of his duties, separately and in addition to his regular compensation.

Chapter VIII
BOARD OF TRUSTEES

Section 1. Board of Trustees. The Board of Trustees shall be the executive and governing body of the Association during vacation of the House of Delegates. It shall consist of nine members, one from each Association District, where terms of office shall be three years and so arranged that only three members are elected annually. A Trustee shall not serve more than three consecutive terms. During vacation, the Board of Trustees shall exercise the powers conferred upon the House of Delegates by the Constitution and these By-Laws, provided that in the exercise of these powers thus conferred, the Board of Trustees shall neither consider nor act to contravene any action, mandate, or policy of the House of Delegates which may still be in effect.

Section 2. Officers of the Board. The Board of Trustees shall elect from its membership a Chairman, a Vice Chairman, and a Secretary for terms of one year during the last day of the annual session following adjournment of the House of Delegates. These officers of the Board shall compose its Executive Committee. The duties of the Secretary may be delegated to the Executive Secretary who shall maintain such special records and transcripts of meetings as the Board may desire.

Section 3. Meetings of the Board. The Board of Trustees shall meet daily during the annual session of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of any three members of the Board.

Section 4. Executive Committee. The Executive Committee of the Board of Trustees shall be empowered to act in behalf of the Board on all matters delegated to it by majority vote of the Board. The acts of the Executive Committee, however, shall be subject to confirmation by the Board.

Section 5. Reports of the Board of Trustees. The Board of Trustees shall make an annual report to the House of Delegates and such supplemental reports as necessity may require at a time designated in the regular transaction of the business of the House. The report shall be made by the Chairman, the Vice Chairman, the Secretary, or the Executive Secretary. The reports of the Board shall be made a portion of the annual transactions and proceedings of the Association.

Section 6. Duties of Trustees. Each Trustee shall be organizer and arbiter for his Association District. He shall visit the component medical societies within his District during each year and shall make an annual report of his activities and of the condition of the medical profession of each county of his District. Each Trustee shall be reimbursed for expenses incurred by him in traveling within his District or attending special meetings in the performance of his official duties, which will be allowed upon presentation of an itemized and documented account. This provision shall not be construed to include his expenses in attending the annual session of the Association.

Section 7. Public Policy. The Board of Trustees shall have the right to communicate the views of the medical profession and of the Association in the State of Mississippi with regard to matters of medical science, health, sanitation, and allied spheres of activity. It shall approve all memorials and resolutions issued but shall not issue memorials and resolutions heretofore prohibited in these By-Laws.

Section 8. Association Districts. The State of Mississippi shall be subdivided into Association Districts by counties, provided that all counties in a component society shall be in one Association District. These districts are defined as follows:

District 1:	Bolivar, Coahoma, Humphreys, Leflore, Quitman, Sunflower, Tallahatchie, Tunica, and Washington.
District 2:	Benton, DeSoto, Lafayette, Marshall, Panola, Tate, Tippah, Union, and Yalobusha.
District 3:	Alcorn, Calhoun, Chickasaw, Clay, Itawamba, Lee, Lowndes, Monroe, Noxubee, Oktibbeha, Pontotoc, Prentiss, and Tishomingo.
District 4:	Attala, Carrol, Choctaw, Grenada, Holmes, Montgomery, and Webster.
District 5:	Hinds, Issaquena, Leake, Madison, Rankin, Scott, Sharkey, Simpson, Smith, Warren, and Yazoo.
District 6:	Clark, Kemper, Lauderdale, Neshoba, Newton, and Winston.
District 7:	Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Pearl River, Perry, and Wayne.
District 8:	Adams, Amite, Claiborne, Copiah, Franklin, Jefferson, Lawrence, Lincoln, Pike, Walthall, and Wilkinson.
District 9:	Hancock, Harrison, Jackson, and Stone.

Chapter IX
COUNCILS

Section 1. Councils. Councils of the Association shall be elected standing bodies of the House of Delegates,

responsible thereto. There shall be a Council on Medical Service, a Council on Scientific Assembly, a Judicial Council, a Council on Constitution and By-Laws, a Council on Legislation, a Council on Budget and Finance, an Editorial Council, and a Council on Medical Education. A Council member shall not serve more than three consecutive terms.

Section 2. Council on Medical Service. The Council on Medical Service shall be charged with the responsibilities of ascertaining and studying all aspects of medical care in Mississippi. It shall examine and make available all facts, data, and opinion on timely and adequate medical care. It shall investigate social and economic aspects of medical care and report its evaluations and findings. It shall suggest means of distribution of adequate quality medical service to the public consistent with the policies of the Association. It shall act as a factfinding and advisory body of the Association. Under its jurisdictions, there shall be assigned the activities of the Association in medical service, emergency service programs, indigent care, and allied medical agencies. There shall be one member from each Association District elected for a term of three years and so arranged that only three members shall be elected for full terms each year. The Council on Medical Service shall appoint Committees on Cancer Control, Occupational Health, Federal Medical Services, Maternal and Child Care, Mental Health, Diseases of the Heart, and Aging. Each committee shall consist of not less than five nor more than seven members appointed for periods of not less than one nor more than three years.

Section 3. Council on Scientific Assembly. The Council on Scientific Assembly shall be composed of the Secretary-Treasurer and the chairmen of the several scientific sections. The Secretary-Treasurer shall be Chairman of the Council. Upon this Council shall devolve the duties and responsibilities of planning the annual session to include all scientific activity and the programming and scheduling of annual session events. The Council shall be empowered to appoint such committees for terms not to exceed one year as may be necessary to assist in the discharge of these duties.

Section 4. Judicial Council. The Judicial Council shall consist of nine members elected for terms of three years each, one from each Association District. The judicial powers of the Association shall be vested in this Council whose decision shall be final. The Council shall have jurisdiction in all questions involving membership in the Association, all controversies arising under the Constitution and these By-Laws, interpretation and application of the Principles of Medical Ethics of the American Medical Association, controversies between two or more component societies of the Association and among members of the Association. The Council shall have appellate jurisdiction in questions and controversies referred to the state Association by appropriate and authorized bodies of component medical societies. Appeals shall be perfected within six months following the date of decision by the constituted authority of the component society. The Council, under these several authorities, may conduct such hearings as may be necessary and after due and legal processes may, by majority opinion, censure, suspend, or expel any member for infraction of the Constitution or these By-Laws.

Section 5. Council on Constitution and By-Laws. The Council on Constitution and By-Laws shall consist of three members elected by the House of Delegates for terms of three years each. To this Council shall be referred all suggested amendments and changes in the Constitution and By-Laws of the Association for recommendation to the Board of Trustees and House of Delegates.

Section 6. Council on Legislation. The Council on Legislation shall consist of nine members, one from each association district, elected by the House of Delegates for terms of three years each which are so arranged that three members are elected annually. This Council shall analyze proposed legislation, recommending to the Board of Trustees courses of action for securing laws in the interests of public health, scientific medicine, as well as medical practice. It shall study and report the need for new and remedial legislation designed to serve the best interests of the state and nation. This Council shall be responsible to the Board of Trustees.

Section 7. Council on Budget and Finance. The Council on Budget and Finance shall consist of three members elected by the House of Delegates for terms of three years each. This Council shall receive reports of the finances of the Association and to it shall be referred all matters pertaining to the annual budget. The Council shall report annually to the House of Delegates, making specific recommendations on the annual budget of the Association. This Council shall be responsible to the Board of Trustees.

Section 8. Editorial Council. The Editorial Council shall consist of the Editor and the Associate Editors, elected by the House of Delegates to serve two years, and the former shall serve as chairman. To this Council shall be referred all reports of scientific subjects and all scientific papers and discussions presented before the Association and its component societies. The Council shall consider for publication in the official organ of the Association such papers, reports, and other data as may serve to further and advance scientific medicine in Mississippi. It shall exercise editorial authority over the official organ of the Association. This Council shall be responsible to the Board of Trustees.

Section 9. Council on Medical Education. The Council on Medical Education shall consist of three members elected by the House of Delegates for terms of three years each. To this Council shall be assigned the responsibilities of encouraging undergraduate and postgraduate study of medicine, licensure, and facilities for medical education in the state. This Council shall be responsible to the Board of Trustees.

Chapter X
COMMITTEES OF THE BOARD OF TRUSTEES

Section 1. Committees of the Board of Trustees. Standing committees of the Board of Trustees shall consist of the Advisory Committee to the Medical Auxiliary, Grievance Committee, the Committee on Publications, and the Committee on Medicine and Religion. All committees of the Board of Trustees shall be appointed by the Board for terms specified unless their selection is otherwise prescribed.

Section 2. Advisory Committee to the Medical Auxiliary. The Advisory Committee to the Medical Auxiliary shall consist of three members appointed for terms of three years each. The committee shall be charged with the responsibility of advising the Woman's Auxiliary to the Mississippi State Medical Association on matters of organization and program activity relating to the supportive role of the Auxiliary in its work with the Association.

Section 3. Grievance Committee. The Grievance Committee shall be appointed by the President with the advice and consent of the Board of Trustees. Its purpose shall be to prevent or resolve misunderstandings, to clarify and adjust differences between physician and patient, and to assist in maintaining the high levels of professional deportment already established by the *Principles of Medical Ethics*. The committee shall consist of nine members, one from each Association District, appointed for terms of three years each so as to provide for appointment of three members annually. Members of this committee shall not simultaneously serve on any disciplinary or appeal body of the Association or its component societies. The committee shall have authority to compel a response either in writing or by personal appearance from any member of the Association, author-

ity to initiate investigations on its own motion, and authority to file charges in the name of the committee before the Judicial Council of the Association. Under no circumstances shall the Grievance Committee ever exercise a disciplinary function and its power and authority shall be limited to the receiving of complaints, conduct of investigations, hearings, mediation, arbitration, and where necessary, referral of matters to appropriate bodies for adjudication or discipline. The committee shall prescribe its rules for operation which shall not be in conflict with generally accepted guides promulgated by the American Medical Association.

Section 4. Committee on Publications. The Committee on Publications shall consist of six members. These shall consist of Editor, the two Associate Editors, and three others, the three latter being appointed by the Board of Trustees for terms of three years which are so arranged to provide for appointment of one such member annually. The chairman of the committee shall be designated by the Board. The committee shall implement instructions and policies of the Board of Trustees relating to the official Journal of the Association. Additionally, the committee shall study and recommend to the Board policy proposals relating to organization and production of the Journal, reporting annually its deliberations.

Section 5. Committee on Medicine and Religion. The Committee on Medicine and Religion shall consist of six members for terms of three years each and so arranged to provide for appointment of two members annually. The committee shall be responsible for formulating a program in the field of medicine and religion and for carrying out such assignments as may be made in this connection by the Board of Trustees.

Chapter XI
RULES AND CONDUCT

The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

Chapter XII
COMPONENT SOCIETIES

Section 1. Component Societies. All component societies now in affiliation with this Association or those that may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and By-Laws shall, upon application to the Board of Trustees and approval by the House of Delegates, receive a charter from and become a component part of this Association. The Board of Trustees and House of Delegates, on recommendation by the Judicial Council, shall have authority to revoke the charter of any component society whose actions are in conflict with the letter and spirit of this Constitution and By-Laws.

Section 2. Number of Societies. Only one component medical society shall be chartered in any county but nothing in this section shall be construed as to prohibit unofficial organization of medical clubs or other county level groups of physicians whose purpose it is to further and advance scientific medicine and postgraduate medical education.

Section 3. Members of Societies. Each component society shall judge the qualifications of its own members, but as such societies are the only portals to this Association and to the American Medical Association, every reputable and legally registered physician who is qualified under Chapter I, Section 1, of these By-Laws shall be eligible for election to membership, provided scientific members shall also qualify under Chapter I, Section 3, subsection (d) of the By-Laws. Before a charter is issued to any component society, full and ample opportunity shall be given to every such physician in the county to become a member.

Section 4. Right of Appeal. Any physician who may feel aggrieved by the action of the society of his county or District in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Judicial Council, which, upon a majority vote, may permit him to petition for membership in an adjacent society.

Section 5. Evidence of Appeals. In hearing appeals, the Judicial Council may admit oral or written evidence, as in its judgment will best and most fairly present the facts, but in case of every appeal, efforts at a conciliation and compromise shall precede all such hearings.

Section 6. Area Jurisdiction. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

Section 7. Professional Authority. Each component society shall have general direction of the affairs of the profession in its jurisdiction and shall constantly use its influence to the moral and professional betterment of its physicians, to the end that the membership shall embrace every qualified physician in its jurisdiction.

Section 8. Meetings. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall especially be encouraged to do postgraduate work, and to give the society first benefit of such labors. Official positions and other preferments shall be unstintingly given to such members.

Section 9. Delegates. Each county shall be entitled to representation in the House of Delegates of this Association, one delegate for each fifty members or fraction thereof. Delegates shall be elected for terms of not less than two years and societies shall report such elections to the Executive Secretary of the Association in no event later than thirty days before the annual session.

Section 10. Duties of Component Society Secretaries. The secretary of each component medical society shall perform such duties as are usual and customary to his office. He shall maintain the official roll of membership for his society, shall collect dues and assessments, and shall make official reports as elsewhere prescribed in these By-Laws to the Association, transmitting dues in behalf of component society members. He shall conduct the official correspondence of his component medical society.

Chapter XIII
FISCAL YEAR

The fiscal year of the Association and its component county societies shall begin January 1 each year and end on December 31 following, but membership in the state Association shall not lapse until April 1 of that year.

Chapter XIV
AMENDMENTS

These By-Laws may be amended at any annual session by a majority vote of the delegates present at that session, after the amendment has laid upon the table for one day.

Chapter XV
REPEALING AUTHORITY

Upon adoption of these By-Laws, all previous By-Laws, motions of record, mandates, policies, rules and regulations in conflict therewith are hereby repealed, except that officers elected to serve in the Association and its component societies shall continue their incumbency until the completion of their previously prescribed terms and their successors elected under the current By-Laws.

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EDITORIALS

The Forward Thrust Of Workmen's Compensation

The Mississippi State Medical Association believes that self-reliance, exercise of personal initiative, and the opportunity to pursue gainful employment are among those factors contributing to the dignity of free men. Where loss of physical capacity occurs in the course of employment, all concerned have an obligation to assist individuals so affected in making physical, economic, and social readjustment. Rehabilitative and restorative services should be placed uppermost to afford opportunity for regaining self-reliance and economic independence.—MSMA Guiding Principles for Medical Aspects of Workmen's Compensation

I

A SIGNIFICANT CHANGE has altered American employment patterns at the midpoint of the century, but the widening scope of workmen's compensation is outpacing even this remarkable shift. In the space of just 25 years, a majority of the work force has moved from the production of goods to the provision of services. Yet, workmen's compensation benefits last year rose to a new high of $1.5 billion, more than triple those of the World War II decade. The whole of this succession of events may not be a revolution, but these dramatic, intermeshing changes in the way we produce our wealth and their effect upon those who work to create it are not really adequately described as evolutionary.

The essential quantities in the workmen's compensation equation are those of an ordered, productive society. Centered around the worker himself are management, employee representatives or labor unions, the insurance industry, state government, and neither least nor last, the health care team headed by the physician. The courts play a prominent, if not an increasing, role of importance in the interpretation and application of compensation law, while the law-making bodies of the several states share in the responsibility for development of a progressive legislative process.

Since its inception in 1911, workmen's compensation has remained largely a creature of private enterprise. With only minor exceptions, it is regulated under the laws of the 50 states and District of Columbia. Virtually all benefit financing is accomplished through the medium of private insurance. Generally, parties participant to the compensation service picture are basically agreed as to purpose and goals of the program.

II

Granting that inflation and the upward cost spiral have made their marks on workmen's compensation statistics, the $1.5 billion aggregate of benefits paid last year was six times greater than the sum of all such payments made from 1911 through 1941. There are logical explanations for this impressive escalation: More workers are covered for an ever-widening variety of job-associated conditions deemed legally compensable.

During the 25 years when the emphasis shift from production to services occurred, the number of workers covered rose from 22 to 46 million in the United States. Underscoring the extension of

coverage, benefits paid annually increased to the $1.5 billion high from $250 million. The geometric pattern demonstrated is a six-times benefit increase concurrent with a two-times coverage extension. There seem to be two significant patterns inherent in the phenomenon.

First, compensation coverage has been extended to those in service occupations, such as finance, transportation, utilities, and what we popularly call office work. Coverage has become almost universal in the goods or production fields with the exception of agriculture where the total of full time workers has declined to 4.9 million from 8 million in 1939. Of no less importance has been coverage extension under broad definitions of occupational disease in addition to job-related injury. And space age technology has entered upon the scene with new compensation challenges and problems, for example, protection of those exposed to ionizing radiation.

III

The expanding spectrum of compensation coverage leaves little doubt over the active roles of management, labor, and state government in this growth process. The increasing capabilities of medicine, the exercise of leadership by medical organization, and the exciting scientific progress in rehabilitation speak well and eloquently for the physician and his colleagues in the allied health professions as to their roles. Only the insurance industry remains, then, to be scored on performance in workmen's compensation, and the record is a proud one in every respect.

The American Mutual Insurance Alliance studied claims services by private carriers in more than 45,000 typical compensation cases in three states from January to June of 1964. Reporting in the *Journal of American Insurance,* AMIA found that in 79.7 per cent of all claims, payment was initiated or made within 14 to 21 days of the injury or disability occurrence. Settlement was made voluntarily after investigation by the carrier in 15.3 per cent of the cases. Only 5 per cent of all claims studied fell into the controverted classification.

AMIA states that mutual companies are currently writing compensation coverage to the tune of $600 million in premiums annually with 89.03 cents of each dollar being returned in benefits, adjudication service, accident prevention and safety programs, taxes, licenses, and fees to government, and dividends to policy holders who purchase the insurance in the first place.

IV

In 1959, the Mississippi State Medical Association formally adopted its "Guiding Principles for Medical Aspects of Workmen's Compensation." The milestone document, drafted by the Committee on Occupational Health after exhaustive study, suggests both goals and a fair, realistic, practical policy framework emphasizing prompt rehabilitation of the occupationally disabled. Many of the goals sought are being realized, and the forward thrust of the compensation program holds encouraging promise. Indeed, the committee looked ahead and anticipated much of what has happened when it stated that "it is apparent that realization of the most equitable employment climate is a progressive legislative process requiring careful adjustment to local situations."

Every participant in the compensation service area, despite gains made and progress realized, still has opportunity and challenge. All will be vitalized in these tasks by the climate of private enterprise in which they may address themselves to the future. Assuredly, most will agree that government alone could never have done the job that independent elements of a free society have achieved through initiative, competition, and open debate. This is good for all who share in the responsibility and for the free American who chooses for himself.—R.B.K.

REFERENCES

1. Purvis, G. D.: Mississippi Medicine and Workmen's Compensation: A Role of Service, J. Miss. St. Med. Assn. 4:355-340 (Aug.) 1963.
2. Guiding Principles for Medical Aspects of Workmen's Compensation, Jackson, Miss. St. Med. Assn., 1959.
3. What's Happening to Whose Job? J. Am. Ins. 40:16-17 (Dec.) 1964.
4. This Team Bats .950, J. Am. Ins. 41:16-17 (Jan.-Feb.) 1965.

Doctor Draft and A New Policy

The doctor draft which hasn't been much of a conversation subject lately is still very much with the medical profession. Lower quotas, easier deferment criteria, and volunteers have made the matter a much less crucial issue to the profession than it was a decade ago. The picture may be changing now, at least in Mississippi.

At a conference of Selective Service officials at Jackson last month, the announcement was formally made that young physicians, especially interns, "will face a tougher, tighter deferment policy in regard to military obligations." The same official who made the policy pronouncement said that a quota of 10 physicians from Mississippi will be filled from among such draft-eligibles.

Plans call for establishment of a special medical board at state level to screen all such appeals, but the inference is that the screening will be conducted under the new and stiffer criteria. Any increase in quota requirements under the new policy would place a new emphasis on doctor draft.—R.B.K.

Sine Quid Pro Quo

During hearings on the Medicare bill, H.R. 6675, before the Senate Committee on Finance, almost all witnesses testifying addressed themselves to the program and benefits aspects of the legislation. The AMA-American Hospital Association hassle over inclusion of the four specialties of anesthesiology, pathology, physiatry, and radiology was easily the high point of the lively debate. Almost nobody talked about the astronomical Social Security tax rate which the bill would impose in order to finance all these government-provided goodies.

If and when such a tax schedule is imposed upon the American work force—and professional individuals, too—it will mark the point at which the Social Security tax shall have been increased more than 1,100 per cent since its enactment in 1935. From the initial tax of 1 per cent each for employee and employer on a wage base of $3,000 to a total of 11.2 per cent on $6,600 is no inconsequential jump from pennies to big dollars. Compulsory inclusion of self-employed physicians in private practice would begin at an annual rate of $355.60 with a scheduled increase to an eventual $514.80 each year.

The Insurance Economics Society of America published some interesting and appalling figures on the new tax. IESA says that a 21 year old worker who enters the labor force under the H.R. 6675 tax schedule will incur a tax loss of $39,974 over his productive lifetime, and his employer will have the same cost. The total of $79,948 is computed on the proposed tax rate and earnings at a modest 3½ per cent interest.

So, even assuming a doubling of cash benefits under Social Security, our worker at age 65 will receive about $4,000 per year for 10 or 12 years until death for $79,948, not quite *quid pro quo*. With this amount in insurance, annuities, savings, or prudent investments, he could live out his life with perhaps three times as much income. Under the latter circumstances, there is great likelihood that he wouldn't mind purchasing his medical care, either.—R.B.K.

LETTERS

Sirs: I wish to take this opportunity to express my deepest appreciation for allowing me to attend the 97th Annual Session of the Mississippi State Medical Association. Aside from my medical school graduation itself, the trip to the convention was the most rewarding experience of my short career. I humbly thank you for your hospitality extended me while I was on the coast.

James N. Anderson, M.D.
Student Delegate
University of Mississippi
School of Medicine
Jackson, Mississippi

NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

Buckley, Theresa Louise Riley, Biloxi. Born Cortland, N. Y., June 11, 1932; M.D., Marquette University School of Medicine, Milkaukee, Wis., 1958; interned St. Joseph's Hospital, Milwaukee, Wis., one year; residencies, V. A. Hospital, Wood, Wis., and Milwaukee Children's Hospital, Wis.: elected March 3, 1965, by Coast Counties Medical Society.

Chernell, Eugene, Jackson. Born New York City, N. Y., Dec. 13, 1933; M.D., New York University, 1959; interned Jewish Hospital of Brooklyn, N. Y., one year; psychiatry residency, Cincinnati General Hospital, Ohio, two years: member, Mississippi Psychiatric Association and the American Psychiatric Association; elected May 4, 1965, by Central Medical Society.

Crawford, Dewitt Grey, Louisville. Born Greenwood, Miss., May 5, 1935; M.D., Univer-

sity of Mississippi School of Medicine, Jackson, 1960; interned City of Memphis Hospitals, Tenn., one year; elected Feb. 4, 1964, by East Mississippi Medical Society.

LANE, DEWEY HOBSON, JR., Pascagoula. Born Starkville, Miss., Sept. 27, 1934; M.D., Tulane University School of Medicine, New Orleans, La., 1959; interned Charity Hospital of Louisiana, New Orleans, one year; surgical residency, Charity Hospital of Louisiana, New Orleans, four years; elected March 3, 1965, by Coast Counties Medical Society.

ODOM, PAUL LEROY, Bay St. Louis. Born Jackson, Miss., Aug. 18, 1934; M.D., University of Mississippi School of Medicine, Jackson, 1963; interned Mobile General Hospital, Ala., one year; elected May 5, 1965, by Coast Counties Medical Society.

ROELL, PAUL ALFRED, Jackson. Born Jackson, Miss., June 21, 1930; M.D., University of Mississippi School of Medicine, Jackson, 1961; interned Mississippi Baptist Hospital, Jackson, one year; anesthesiology residency, University of Mississippi School of Medicine, Jackson; member, Mississippi Society of Anesthesiologists and the American Society of Anesthesiologists; elected May 4, 1965, by Central Medical Society.

SIGREST, MARION LANE, Yazoo City. Born Flora, Miss., July 26, 1929; M.D., University of Mississippi School of Medicine, Jackson, 1962; interned Memorial Hospital of Chatham County, Savannah, Ga., one year; member, American Academy of General Practice and the Association of American Physicians and Surgeons; elected April 6, 1965, by Central Medical Society.

PERSONALS

A. M. ADAMS, JR., has announced the opening of his offices in Senatobia for the general practice of medicine and surgery. Dr. Adams received his M.D. degree from the University of Tennessee and interned at the Methodist Hospital in Memphis. He has practiced for the past year in Starkville.

BEN F. BANAHAN, JR., JOHN ROY BANE, WILLIAM E. LOTTERHOS, and HARDY B. WOODBRIDGE with ALBERT J. MCILWAIN, visiting radiologist, have announced the opening of the Family Medical Center in Jackson.

JULIAN C. BRAMLETT has announced the opening of his office in Oxford for the practice of surgery and medicine.

KIRBY K. BRYANT, JR., who practiced at the Mantachie Clinic for the past six years will enter a residency in general surgery at Kennedy Veterans Administration Hospital in Memphis on July 1. THOMAS J. MCDONALD will assume direction of the clinic.

VERNER HOLMES of McComb, chairman of the Board of Trustees of the Institutions of Higher Learning, was recently initiated into Omicron Delta Kappa, honorary leadership fraternity at Mississippi State University.

D. L. HOLLIS was presented a 50-year certificate of recognition by the Alabama State Medical Association at the University of Alabama. The presentation recognized the Biloxi physician as a graduate of the medical class of 1915 at the university. Dr. Hollis has practiced in Biloxi since 1930.

CHARLES A. OZBORN has announced the opening of his offices in Eupora for general practice. Dr. Ozburn received his M.D. degree from the University of Mississippi School of Medicine and is presently interning at the Baptist Hospital in Jackson.

PATRICK C. PIERCE has announced the opening of his office in Gulfport for the practice of ophthalmology.

G. SAMUEL ROWLETT has joined the staff of the Street Clinic and Mercy Hospital in the Department of Orthopedics. Prior to moving to Vicksburg, Dr. Rowlett was on the faculty of the Louisiana State University School of Medicine in New Orleans.

WALTER SIMMONS of Jackson won the overall prize in the Jackson Chamber of Commerce's recent membership drive. Dr. Simmons obtained 10 new members during the one-week drive and received a deep-sea fishing trip as his award.

HAL M. TERRY of Goodman was recently honored at a banquet for his years of service to Holmes Junior College. Dr. Terry has been college physician for 27 years.

Book Reviews

Surgery in World War II, Volume II, Activities of Surgical Consultants. In the series the History of the Medical Department, U. S. Army in World War II. Editor in Chief, Colonel John Boyd Coates, Jr., M.C., USA; Editor for Surgery, B. Noland Carter, M.D. 1100 pages with 365 illustrations, six charts, eight maps, five tables. Washington: The Historical Unit, United States Army Medical Service, 1964. $8.50.

Volume I was concerned with the Surgeon Generals Office and Activities in the U. S. This Volume II is concerned with the activities of the Surgical Consultants on the theater level overseas. I was personally acquainted with the Surgeon General—The Chief Surgical Consultant in Washington, General Fred Rankin of Mayo Fame and General Hugh Morgan of Vanderbilt, the Medical Chief Consultant. While the clinical matters were of paramount importance to the Surgical Consultants, there also were certain administrative matters of necessity that went along with these. Personalities are always a problem too that have to be considered. The pattern was the same for the zone of the interior and overseas.

The story is told with clarity and frankness and a great deal of it is based on General Cutler's diary which he kept in detail with deletions and additions as it became necessary to tell the story. It goes without saying that with World War I facts of operation on hand and known to many men at that time, all profited from their previous experience.

General Cutler of Boston was the Chief Consultant in Surgery in the European Theater and it was his idea to push for more general surgeons close to the scene of battle and Mobile Hospitals to get closer to the front lines. Early ambulation was one of the things he insisted on. A certain amount of research was carried on by examining those killed to determine how and where the fatal injury occurred.

General Hawley was the Chief Medical Officer in the European theater and known to us all. Fully one-third of this volume is devoted to the Chief Consultant in Surgery General Cutler described as "Master Surgeon, Inspiring Teacher, Peppery Patriot and Intense Anglophile." Ambrose Storck of New Orleans was Senior Consultant in surgery but due to illness was replaced by Col. Zollinger, known to us all by his teaching and writing.

Neurological Surgery was headed by Loyal Davis of Chicago and Northwestern University. Ophthalmology-Orthopedic Surgery and Rehabilitation, Otolaryngology, Plastic Surgery, Urology and Anesthesia were all represented by outstanding men who aided greatly in the effort of healing the sick and wounded and getting the men and women back to duty.

The latter one-third of the volume is devoted to the Pacific Ocean Areas and the war from Southwest Pacific to Tokyo and the India-Burma and China Theaters. The trials and tribulations, the inventiveness of necessity and the American way to do a fine job are outlined in this interesting volume.

LAWRENCE W. LONG, M.D.

Preventive Medicine in World War II, Volume VII, Communicable Diseases, Arthropodborne Diseases Other Than Malaria. In the series, the History of the Medical Department, U. S. Army in World War II. Editor in Chief, Colonel John Boyd Coates, Jr., M.C., USA; Editor for Preventive Medicine, Ebbe Curtis Hoff, Ph.D., M.D.; Assistant Editor, Phebe M. Hoff, M.A. 370 pages with 65 illustrations, 48 tables, 21 charts, 12 maps and an index. Washington: The Historical Unit, United States Army Medical Service, 1964. $4.25.

This volume is a historical account by separate authors from their personal experience with arthropodborne diseases in World War II except malaria.

This book should be of great interest to epidemiologists and public health physicians because of the approach to the problems of identification, transmission, control, and prevention of arthropodborne diseases. The natural history of the vectors in regard to geographical distribution, habitats, flight habits, and time of attack make fascinating reading. The physician in private practice will find current information on clinical manifestation of these diseases as well as treatment, although the clinical description of the diseases are brief. The development of the vaccines and use are discussed. The use of insecticides, principally

DDT, is discussed for environmental dusting and body dusting.

Illustrations for the typhus fevers are excellent. Other diseases discussed are encephalitis, bartonellosis, dengue, filariasis bancrofti, leishmaniasis, plague, relapsing fever, sandfly fever, and yellow fever.

Military and civilian people are compensated to some degree for the tragedy of World War II by the extensive knowledge gained in the prevention and treatment of arthropodborne diseases.

MARIAN W. GODBEY, M.D.

Books Received

Dorland's Illustrated Medical Dictionary. ed. 24. 1724 pages. Philadelphia: W. B. Saunders Company, 1965. $13.00. (Deluxe edition, $17.00.)

Tracy's The Doctor as a Witness. By William J. Curran, LL.M., S.M. Hyg. ed. 2. 196 pages. Philadelphia: W. B. Saunders Company, 1965. $5.75.

Rheumatic Fever: Diagnosis, Management, and Prevention. By Milton Markowitz, M.D., and Ann Gayler Kuttner, M.D., with a special chapter on community health services by Leon Gordis, M.D. Volume II in the series Major Problems in Clinical Pediatrics, Alexander J. Schaffer, Consulting Editor. 242 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $7.50.

Trauma to the Liver. By Gordon F. Madding, M.D., and Paul A. Kennedy, M.D. Volume III in the series Major Problems in Clinical Surgery, J. Englebert Dunphy, M.D., Consulting Editor. 134 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $6.00.

State Morbidity Reported Through June 4

The Mississippi State Board of Health reports the following occurrence of morbidity for 1965 through the 23rd week of the year, ending June 4, 1965. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul.	644
Tuberculosis, O.F.	18
Typhoid fever	3
Encephalitis, infectious	7
Septicemia, Staph.	3
Dysentery	
Bacillary	19
Amoebic	1
Dysentery, NOS	2
Leptospirosis	1
Meningococcal infections	14
Diphtheria	1
Mononucleosis, infectious	28
Hepatitis, infectious	153
Tetanus	2
Helminthic infections	
Hookworm	441
Ascariasis	155
Strongyloides	17
Meningitis, O.F.	18
Histoplasmosis	2
Other Cestode Infestations	5
Salmonella Inf.	8
Gastro-enteritis	1
Streptococcus infections	
Scarlet fever	27
Strep throat	938
Pertussis	10
Measles	1,324
Chickenpox	246
Mumps	319
Vaccinia, smallpox	1
Influenza	5,891
Gonorrhea	2,120
Syphilis	
Early	304
Late	41



"But I only came in to bare my emotions!"

MSMA Emergency Medical Care Unit Opened for Special Legislative Session

The Emergency Medical Care Unit, a service of the association to the Mississippi legislature, was reopened June 14 when the special session was convened at Jackson. The dispensary type unit is located in Room 401-B of the New Capitol and serves members of the House of Representatives and Senate during the session.

This was the announcement of Drs. Everett Crawford of Tylertown, president; John B. Howell, Jr., of Canton, chairman of the Board of Trustees, and William E. Lotterhos of Jackson, chairman of the Council on Legislation under which the care unit is operated.

Ila G. McCleave, R.N., of Jackson is serving as staff nurse. Mrs. McCleave held this position during the regular and special sessions of the legislature in 1964 when the unit was initially opened.

Dr. Lotterhos said that the leadership of the legislature, Hon. Walter Sillers of Rosedale, speaker of the House of Representatives, and Hon. Carroll Gartin of Laurel, Lt. Governor and president of the Senate, formally invited the state medical association to reopen the care unit.

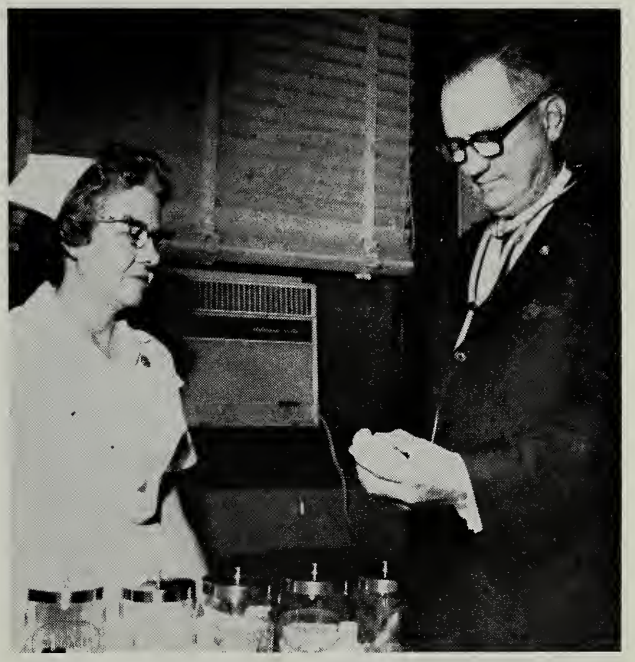
Leading off as "Doctor of the Day" on June 14 was President Crawford. Both he and Mrs. McCleave were presented to the opening meeting of the legislature by Speaker Sillers who expressed appreciation to the association in behalf of the House and Senate. Among MSMA leaders devoting a day in the unit were Dr. James T. Thompson of Moss Point, president-elect, and Dr. Lotterhos.

The concept of the care unit was approved during the 95th Annual Session in 1963 and first opened on Jan. 28, 1964, for the regular session. Following the record-breaking, six months regular session, the unit was reopened for the brief summer special session. In all, the care unit served the law-makers on 94 legislative days over 23 weeks of legislative activity. The Council on Legislation said that 74 doctors of the day from 42 Mississippi counties served.

Dr. Lotterhos said that Kay Surgical, Inc., of Jackson and Memphis has made equipment available to the association in support of the project.

During 1964, nearly 500 visits to the care unit by legislators and capitol personnel were recorded. Treatment by doctors of the day ranged from emergency care of cardiac conditions to minor ills and discomforts, including one member of the House of Representatives who was stung by a wasp during a committee hearing.

To assure optimum care in unforeseen emergencies, legislators were requested to register with the care unit, furnishing the name of their respective family physicians, histories of allergies, and a description of conditions which may require continuing care. A majority of the members of both houses visited the unit for medical services at least once, and many were seen on more than one occasion.



The Emergency Medical Care Unit opened to serve the June special session of the legislature in the New Capitol building at Jackson. Dr. Everett Crawford of Tylertown, MSMA president, was the first Doctor of the Day. Mrs. Ila G. McCleave of Jackson served as staff nurse.

At the regular and special sessions last year, the legislature passed concurrent resolutions of appreciation and commendation to the state medical association for sponsoring the clinical facility. During the 1966 regular session, there will again be opportunity for interested members to serve as doctors of the day.

Robins Company Hosts Award Winners

Fifteen winners of the physician award for outstanding community service visited Richmond May 6-9 as guests of the A. H. Robins Company and its president, E. Claiborne Robins.

Each of the physicians had been selected as having the greatest record of community service for a doctor in his state.



Dr. Howard A. Nelson (left) of Greenwood, Miss., chats with E. Claiborne Robins, president of A. H. Robins Company, Richmond, Va., pharmaceutical manufacturer. Dr. Nelson was one of 15 physician award winners who visited Richmond May 6-9 as a guest of the company and Mr. Robins.

In the group were Dr. Walter D. Brazie of Kingman, Ariz.; Dr. Bradford Murphey of Denver, Colo.; Dr. Marvin C. Korengold of the District of Columbia; Dr. Eugene G. Peek, Sr. of Ocala, Fla.; Dr. William J. Holmes of Honolulu, Hawaii; Dr. Charles W. Steele of Lewiston, Maine; Dr. Earl M. Beardsley of Salisbury, Md., and Dr. Howard A. Nelson of Greenwood, Miss.

Also in the group were Dr. John C. Hagin of Miller, S. D.; Dr. George R. Aiken of Kanab, Utah; Dr. Howard J. Farmer of St. Johnsbury, Vt.; Dr. M. Shelby Jared of Seattle, Wash.; Dr. C. W. Jeffrey of Rawlins, Wyo.; Dr. Thomas H. Jennings of Bedford, Va. and Dr. Jaime F. Pou of Santurce, Puerto Rico.

During their stay, the physicians were greeted at a breakfast by the Honorable Morrill M. Crowe, mayor of Richmond, toured Robins' manufacturing plant and research center, and attended a reception and dinner.

At the dinner, they were welcomed to Virginia by Dr. McLemore Birdsong of Charlottesville, president of the Medical Society of Virginia. Also on hand to welcome the group were Dr. William Hill, president of the Richmond Academy of Medicine, and Dr. R. Blackwell Smith, Jr., president of the Medical College of Virginia. Another highlight of the visit was a day-long trip to Colonial Williamsburg, where the physicians toured the restored capital.

A. H. Robins, founded in 1878, is a leading manufacturer of ethical pharmaceuticals.

SMA Announces 1965-66 Grant Recipients

The Southern Medical Association has announced the following recipients of the 1965-66 Residency Training Grants: Drs. William M. Chadduck of Charlottesville, Va.; Michael D. Howard of Galveston, Texas; Dean LeMar Mann of St. Louis, Mo.; Lionel Z. Naylor, Jr., of Memphis, Tenn.; Richard S. Riggins of Memphis, Tenn.; Charles D. Teates of Charlottesville, Va., and James T. Wharton of Galveston, Texas.

The Residency Training Grant Fund was established at the 1962 meeting of SMA. The grant-in-aid principle has been followed in making assistance available from the Fund with recipients assuming no legal obligation to repay monies received; however, the Fund has been established in a manner which will allow recipients to make tax deductible donations to the Fund and thereby increase the number that could be assisted in the future.

The maximum grant available to each recipient is $2,400, payable at the rate of $200 per month for 12 months.

Official application forms for the 1966-67 grants may be secured from the Executive Director, Southern Medical Association, 2601 Highland Avenue, Birmingham, Ala. 35205. Deadline for receiving applications each year is May 1.

Lakeside Labs Makes Record Ad Buy

Lakeside Laboratories of Milwaukee, Wis., has made the largest single advertising purchase in JOURNAL MSMA in the history of the publication. The transaction was for 54 full pages to be published in a six months' period.

This was the joint announcement of Dr. Lawrence W. Long of Jackson, chairman of the association's Committee on Publications, and Dr. W. M. Dabney of Crystal Springs, editor of the JOURNAL. They said that negotiations for the sale were completed between Lakeside Laboratories and the association through Frank J. Corbett, Inc., of Chicago, the advertising agency representing Lakeside, and the State Medical Journal Advertising Bureau, also of Chicago.

The long-established and respected manufacturer of ethical pharmaceuticals will use nine pages monthly during the July-December period of 1965. The announcement also emphasized that Lakeside Laboratories will carry this communications program in only 17 state medical journals.

In conveying appreciation to Lakeside for its expression of confidence in the JOURNAL, Dr. Everett Crawford, president of the association, told Raymond D. Hetterick, president of the drug company, that physicians of the state have pride of ownership in the JOURNAL and that "the messages of your respected pharmaceutical manufacturing organization will be well received."

The advertising purchase transaction tops by nearly 20 pages any previous single client sale for a six month period. Drs. Long and Dabney expressed satisfaction over Lakeside's joining the select group of ethical pharmaceutical advertisers in the JOURNAL'S pages.

AMA To Sponsor Conference on Sports

The Seventh National Conference on the Medical Aspects of Sports, sponsored by the American Medical Association under the auspices of the AMA Committee on the Medical Aspects of Sports, will be held in Philadelphia, Penn., at the Benjamin Franklin Hotel on Nov. 28, 1965.

The conference is held annually in conjunction with and on the first day of the Clinical Convention of the American Medical Association. In addition, the Conference will be held in cooperation with the observance of the bicentennial anniversary of the University of Pennsylvania's School of Medicine and of medical education in the United States.

NIH Executive Joins University Staff

A former National Institutes of Health executive has been named to a new post at the University Medical Center.

Dr. Donald T. Chalkley will be assistant to the director for research administration, effective August 1, and will also pursue his own studies in experimental embryology. He is presently executive secretary of the pathology study section for NIH. Among his other responsibilities, he is one of six project assignment officers for the Division of Research Grants.

The new post Dr. Chalkley will fill is necessitated by grant growth at the Center, according to Dr. Robert Q. Marston, director and dean.

Dr. Chalkley was born in Louisiana and spent the early years of his life in Starkville, where his father attended college and his mother taught school. He received his B.A. degree from Oberlin



Dr. Donald T. Chalkley, left, has been named assistant to the director for research administration at the University Medical Center. Dr. Chalkley, shown with Dr. Frank Zimmerman, center, UMC comptroller, and Dr. Robert Q. Marston, director, is presently executive secretary of the pathology study section for NIH. His appointment is effective August 1.

College, M.A. from Amherst, and Ph.D. from Princeton.

Before he went to Washington with NIH in 1956, Dr. Chalkley taught at Amherst, Princeton and Notre Dame, where he was an assistant professor.

AUXILIARY

State President Reports Year's Activities

Mrs. T. J. Safley of Jackson, 1964-65 president of the Woman's Auxiliary to MSMA, gave the annual President's Report during the May 11 luncheon.

Mrs. Safley reported that during her year as president the membership of the state auxiliary increased by 92 members to an all-time high of 913. She noted that Monroe County Auxiliary merged during the year with Northeast, but that the number of auxiliaries remained the same with the addition of the new Bay St. Louis Unit to the Coast Counties Auxiliary.

Twenty-one auxiliaries contributed amounts ranging from $5 to several hundred dollars to AMA-ERF, Mrs. Safley reported. The total amount raised over the state was over $1,300.

For the first time, said the outgoing president, the Mississippi auxiliary participated in the International Health project of the National Auxiliary. Eleven county auxiliaries sent 47 barrels and boxes of sample drugs, weighing over half a ton, to World Medical Relief, Inc. Drug samples were donated to a Golden Age Nursing Home and approximately $8,000 worth of drugs, collected by an auxiliary member, was shipped to missionaries in cooperation with a local church.

Reporting on Doctor's Day, Mrs. Safley said 21 auxiliaries observed the occasion with proclamations, publicity, luncheons, and dinners. In another project, over 1,000 reprints of *M.D. Magazine's* editorial "To Be a Doctor" were distributed throughout the state to high school seniors interested in medical careers, noted Mrs. Safley.

Reporting on the Nurse Loan program, Mrs. Safley said $200 from the State Nurse Loan Fund was granted to a student in the Gilfoy School of Nursing, with an additional $100 to be paid in June. Four county groups made loans to student nurses, one offering three loans. Two auxiliaries offered scholarships (gifts, not loans) and one group gave three of $150 each as High Standards Scholarships. The total amount furnished by auxiliaries to encourage worthy young persons to enter health careers was $1,335, said Mrs. Safley.

Three county auxiliaries sponsored active and successful Future Nurses Clubs, continued Mrs. Safley, and another is planned in the near future. With the services of a professional photographer, the state auxiliary produced a 35 mm color slide program with commentary, called "Preventorium and Its Gift of Health." Mrs. R. C. O'Ferrall, preventorium chairman, will send the slides to county auxiliaries wishing to use them for one of their programs, said Mrs. Safley.

To promote safety this year, a statewide poll of users of safety belts was made, said Mrs. Safley. Mrs. Charles Thompson also distributed the State Board of Health warnings on the use of household cleaning agents. An outstanding project on Railway Safety was reported by Gulfport, which received the MSMA Auxiliary's Special Award, announced Mrs. Safley.

Concluding, Mrs. Safley told the Auxiliary members, "The importance and value of these contributions to your communities, to the state, and to your husband's profession can never be measured."



Copyright 1965, Mississippi State Medical Association

"Take a good look! Now, are you sure that every bone in your body aches?"

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION
JACKSON, MISSISSIPPI

August 1965

Dear Doctor:

The new law requiring a health hazard warning on cigarette packages represents a major victory for the tobacco industry - not the public. Final bill was a compromise which, in spite of label warning, prohibits Federal Trade Commission or any government agency from taking any action against cigarette advertising for four years.

> FTC had announced it would require smoking hazard warning in printed, TV, and radio cigarette ads. Tobacco state congressmen engineered package label caution with sky-blue ad proviso, making it appear they'd lost when they delivered for fag makers.

The Mississippi Hospital Association has established a library in memory of the late Reed B. Hogan of Clarksdale. Facility, located in Blue Cross headquarters at Jackson, will have professional librarian and serve as a central research and reference source on hospital management and health economics for member institutions. Hogan was administrator of Coahoma County Hospital and an MHA past president.

Boxing can't be made safe - only safer, says the American Medical Association, about the only sport where deliberate injury is the objective. Rules revisions urged include better medical supervision of boxers, protective equipment, and a new scoring system emphasizing skill in offense and defense. Recent survey showed physicians about as divided on controversial issue of abolishing boxing as general public.

The head of the U.S. Children's Bureau says that 24 states are spending $1.75 million in 1965 on birth control. With the federal government no longer winking at issue, Mrs. Katherine B. Oettinger disclosed that part of annual expenditure is federal money. Most such programs are administered by state health departments.

The Governor's Committee on Hospital Costs in New York state estimates that hospital care will cost about $100 per day in 1973. With extras, the report continues, the average stay for short term, acutely ill patients will run about $1,066. Sweeping proposals to contain price spiral, including reorganization of Blue Cross, have been made.

Sincerely,

Rowland B. Kennedy
Executive Secretary

DATELINE - MEDICAL AMERICA

Chiropractor Settles Fluoridation Suit

San Jose, Calif. - Arden Zimmerman, chiropractor and a militant antifluoridation spokesman, has been made to cough up on his offer to pay $1,000 for proof of safety of fluoridated water. The Santa Clara Dental Health Association sued the cultist, settled for $500 out of court, and used the money in the fluoridation campaign. A DHA official said, "If we seem to be adding insult to Mr. Zimmerman's injury, it's intentional."

FDA Backs Down On Electronic Snooping

Washington - The Food and Drug Administration promised the U.S. Supreme Court that it wouldn't use hidden tape recorders again after a company sued to enjoin the agency which had planted a snooping device in its plant during an inspection. Recent hearing before Senate Judiciary Committee elicited testimony of cloak and dagger practices by FDA.

AMA Turns Thumbs Down On Foreign Trained Externs

Chicago - AMA's Council on Medical Education says it "does not approve the appointment of foreign medical students to externships for purposes of fulfilling the 'internship' requirements" of their schools. Decision was occasioned by flood of applications from hospitals for externship approval of Americans in foreign schools. AMA decision is based on premise that appointment entails patient care by unqualified individuals.

Telephone Company Is Liable For Incorrect Doctor Listing

New Orleans - A Louisiana physician has recovered damages from the Southern Bell Telephone and Telegraph Company caused by its failure to list his new office address in the directory. The trial court award of $2,500 was pared down on appeal with a ruling that no actual damages were sustained. In suit, the doctor showed loss of $5,000 for year in question in net receipts.

Drug Prices Decline For Sixth Straight Year

Washington - The Pharmaceutical Manufacturers Association announced that the wholesale price index for ethical drugs declined again in 1964 for the sixth consecutive year. Based on the 1949 index base of 100, the composite price level dropped from 86.2 in 1963 to 86.0 last year. PMA points out that while all wholesale prices have risen 20 per cent, wholesale prices of drugs have declined 14 per cent. Index is compiled independently of PMA by City University of New York. By category, most dramatic price slashes since 1949 are antibiotics, 63 per cent; steriods, 50 per cent; and diuretics, 8 per cent.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
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ORIGINAL PAPERS

Transfusional Therapy

ROBERT B. THOMPSON, M.D.
Jackson, Mississippi

The numerous benefits from needed blood transfusions are well known. Less widely recognized, however, are the risks inherent in any transfusion. The author reviews the problems encountered in transfusional therapy, and discusses evaluation of the patient's condition and the type of transfusion indicated.

SINCE THE ADVENT OF A B O and Rh Groupings, the indications for the use of blood transfusions has become an important adjunct to therapy. However, as is the case with other therapeutic agents, certain facets become of prime importance before the initiation of therapy. It is the purpose of this paper to deal with the problems most commonly encountered by physicians outside of medical centers.

Modern blood transfusion techniques represent perhaps one of the greatest advances in the history of modern therapeutics as was most dramatically illustrated in the Korean War (1950-1953).[1] There is however, a wide gap existing between the use of blood and knowledge of its proper use. Unfortunately, blood is sometimes dispensed as a common therapeutic agent with little thought given to the possible contraindications despite their severity. As many as 3,500,000 blood transfusions are administered yearly in the United States, and the number will probably increase proportionately to the new extensive surgical procedures which require larger volumes of blood. Fatalities due to transfusion reactions have been estimated at approximately one death in 1,000 to 3,000 transfusions.[2] The modern physician is increasingly involved in weighing the danger of the disease against complications arising from the use of various therapeutic agents and the utilization of blood should be no exception.

The problems encountered are threefold, namely: (a) indications for transfusion, (b) type of blood or blood substitute to be used, and (c) diagnosis and management of transfusion reactions plus problems in administration of blood.

Before a transfusion is administered, the physician should fully consider the following facets: (a) the composition of blood which is a complex liquid composed of cellular and fluid elements, each of which has a specific function and each of which should be considered separately and collectively in the decision for or against a transfusion, (b) the effect of the transfusion on the existing blood volume, (c) the survival of the various elements of which blood is composed, (d) the possibility of the development of iso-antibodies, especially in women during the child bearing age.

As we pointed out earlier, blood is a complex liquid composed of both cellular and fluid components. The cellular component comprises 40-45 per cent of the total volume consisting of erythrocytes, leukocytes, and platelets while the liquid element, 60 per cent by volume, is composed of plasma and its constituents. Thus, prior to transfusional therapy, one should consider whether or not whole blood, packed cells, leukocytes, platelets, and/or plasma are required. Secondarily, the

From the Department of Clinical Laboratory Sciences, University of Mississippi School of Medicine.

type of preservative and type of container in which the blood is collected for administration needs consideration.

WHOLE BLOOD

Whole blood is the most frequently used and best known type of therapeutic agent used in transfusion. It is principally indicated;

(a) in rapid and massive loss of blood as occurs with gastrointestinal hemorrhage or associated with diminished blood volume,

(b) in newborn infants presenting the features of erythroblastosis fetalis,

(c) in bleeding disorders caused extensively by defects in blood clotting.[3]

With the use of whole blood, certain limitations are always present and may be of such degree as to contraindicate this form of therapy. Foremost is the age of the red cells at the time of administration. Reference to Figure 1 illustrates the percentage survival of stored red cells after varying periods of storage at 4°C. For optimal use, red cells should be less than 21 days old (Figure 2). This is not to say that the use of 28-day-old blood is unacceptable, but from 21 days onward, there is an increasing rapid deterioration of red cells with hemolysis and subsequent release of potassium. Some preservatives such as heparin or EDTA necessitate that blood be used under 24 hours.

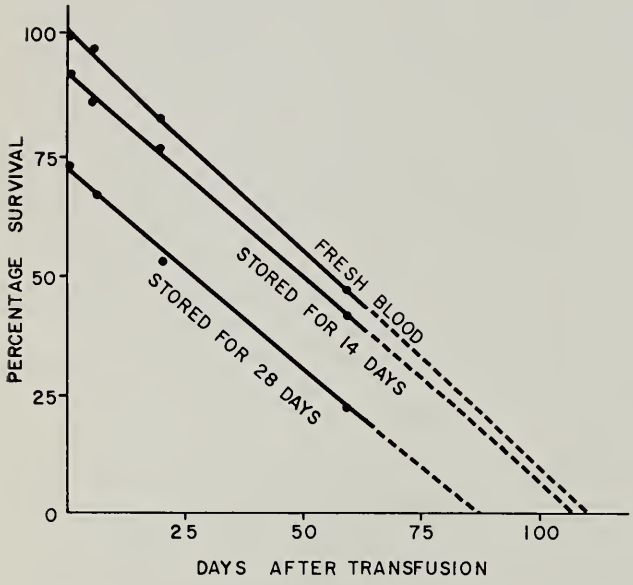


Figure 1. Schematic representation of bank blood erythrocytes after transfusion.

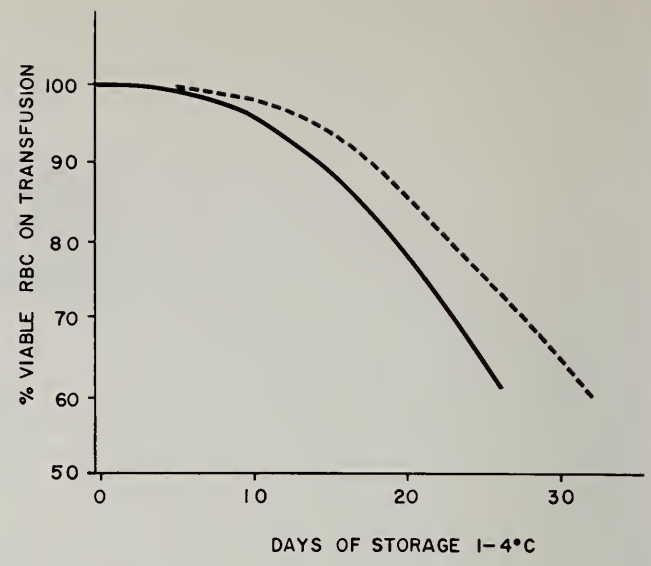


Figure 2. Percentage survival of blood bank erythrocytes in ACD in storage at 4°C.

PACKED CELLS

The second form of administering blood is as red cell suspensions or packed cells. Packed cells have the advantage over whole blood in that larger doses may be given as a single transfusion without increasing blood volume. However, with the administration of packed cells, one should preferably use blood less than 5 days old. The primary indications of red cell suspension are for (a) anemias with normal blood volumes, (b) elderly, debilitated patients, or (c) patients with cardiac and pulmonary disease in whom an increase in blood volume might possibly result in an aggravation of an already impaired cardiac status. An applicable rule of thumb to determine the approximate blood volume is as follows:

(a) 8 per cent of body weight is blood

(b) 1 pound approximates 1 pint or 500 ml. of blood

Calculations: (assuming a body weight of 100 pounds)

(a) 8 per cent of 100 = 8 lb. of blood

(b) $8 \times 500 = 4000$ ml. of blood (ratio 1/8)

(c) $\frac{4000}{100} = 40$ ml. (amount of blood per pound)

Therefore to calculate blood volume, multiply body weight in pounds by 40.

To determine the amount of blood necessary to reach a required hematological value hemoglobin per cent, hematocrit, or RBC, it is necessary to be able to calculate a percentage ratio between units of blood and estimated blood volume, for example,

actual hemoglobin 40 per cent
desired hemoglobin 80 per cent

To raise the hemoglobin 40 per cent, one would require $\frac{40}{1/8} = 40 \times .08 = 3.2$ units of blood.

PLATELETS

Apart from whole blood or packed erythrocytes, other cellular elements such as platelets or leukocytes may be required. The use of platelets as a pure suspension is laborious and time consuming, and considering the risk of stimulation of platelet antibodies, their use in hospitals apart from medical centers or research institutes is questionable. The primary use is in bleeding or clotting deficiencies such as idiopathic thrombocytopenic purpura or leukemia. In addition, it is necessary to prepare the platelet suspension within four hours of the time of drawing the blood sample.

LEUKOCYTES

The use of leukocytes as a form of transfusional therapy is still in its experimental stage and not advisable on a routine basis.[3]

PLASMA

The fluid element, plasma, contains many useful constituents each of which may play a specific role. Some of the more important factors are albumin, fibrinogen, immune globulin, and such clotting factors such as V, VII, and X. The administration of plasma re-establishes the effective blood volume. It can be rapidly and safely administered to an individual in shock without unnecessary crossmatching and conserves bank blood. The primary indications for plasma transfusion are (a) as an emergency measure in combating irreversible shock to prevent liver, renal, and cerebral damage due to anoxia, (b) in severe dehydration, (c) in severe burns and crushing injuries where the immediate defect is plasma, and (d) in correcting clotting deficiencies.

Several forms of plasma therapy may be used, either fresh or fresh frozen plasma, stored plasma or lympholyzed plasma (anti-hemophiliac globulin). The latter is available in most commercial houses for administration to hemophiliacs.

In most instances, need for correction of defects of blood and extra cellular fluid volumes is determined by observation and laboratory procedures with the estimation of the dosage appropriate to the patient's reactions. Blood alone is seldom required for best resuscitation. Packed cells without plasma are necessary to correct associated anemia in old patients. Electrolyte solutions are chosen on the basis of the ionic composition of the plasma. The patient properly prepared with transfusion replacement of surgical blood loss has stable blood pressure during operation and the immediate postoperative period; failure to achieve hemodynamic equilibrium is a sign of faulty replacement, injury, or infection.

Successful storage of whole blood for transfusional purposes depends primarily upon the type of preservative solution used. Other factors such as anticoagulant isotonicity, pH maintenance, the amount of dilution, and the method of collection, all affect the storage characteristics of blood. The possible effect of blood preservatives upon the patient receiving blood should be considered. The common preservative in use today is ACD or (Acid Citrate Dextrose). Each of these anticoagulants has its advantages and disadvantages, all of which should be considered when giving a transfusion. The use of whole blood and separate components of whole blood are briefly summarized in Table 1.

TABLE 1

USES FOR WHOLE BLOOD AND BLOOD COMPONENTS

Therapeutic Agent	*Indications*
Whole Blood	Massive blood loss Exchange transfusions Bleeding disorders Chronic anemias with decreased blood volume
Packed Cells	Elderly patients with normal blood volume Cardiac or pulmonary patients Iso-antibodies
Platelets	Thrombocytopenia
Plasma	Burns or crushing injuries Dehydration Clotting deficiencies Emergency—blood loss shock

The second phase in blood transfusion therapy are the complications or reactions encountered. Fear of fatal reactions to blood transfusion has been exaggerated because of the use of out of date statistics. The mortality figures generally quoted, 0.02-0.1 per cent, were derived from a review of about 70,000 transfusions dating from 1917 to 1943,[4] with one death closely related to incompatibility between donor and recipient blood. From 1946 to 1954 the Mayo Clinic re-

ported 59,788 transfusions without a death, an incidence of 0.00046 per cent. However, as pointed out earlier, the incidence of transfusion reactions is considerably higher.

COMPLICATIONS

The principal complications of blood transfusions may be outlined as follows: (a) allergic reactions, (b) circulatory overload, (c) hemolytic reactions, (d) pyrogenic reactions, and (e) transmission of disease. Of all the complications listed, the hemolytic reactions resulting from transfusion of incompatible cells are the most dreaded because of fatal results. However, the commonest cause of death associated with transfusions but not coded as such in medical records is circulatory overload.[5] It frequently is a contributing cause of death, the proverbial straw that broke the camel's back. Circulatory overload may result from too rapid or too voluminous transfusion.[6] Heart failure is apparent by increased venous pressure and pulmonary edema. Careful evaluation of the cardiovascular status plus administration of packed cells instead of whole blood, may prevent many such cases. Cardiac arrest due to rapid administration of bank blood, probably the result of potassium intoxication, might be classified in this group.[5] Potassium continuously escapes from erythrocytes during storage of blood, causing a progressive increase in plasma potassium concentration. Ice cold blood enhances the sensitivity of the myocardium to arrhythmias and has a higher potassium concentration than blood allowed to warm to room temperature.

Allergic reactions may occur following the transfusion of whole blood, plasma, or cells. These are probably due to a response of the recipient to an allergent in the donor blood. It is also possible that some recipients may be passively sensitized by transfusing plasma from an allergic individual. Reactions are characterized by the appearance of urticaria, shortness of breath, and headache. The administration of small doses of epinephrine or a suitable antihistaminic usually result in a subsidence of the symptoms. Patients receiving multiple transfusions incur greater risk of febrile reactions due to the development of sensitization to factors other than erythrocytes such as leukocytes and/or platelets.

Pyrogenic reactions present with a 2 per cent incidence[1] and although usually due to introduction of some foreign material into the blood stream, may also be attributable to sensitization and/or leukocytes and/or platelets. These are usually characterized by fever, chills, headache, shortness of breath and occasionally hypotensive episodes. The administration of aspirin, benedryl and/or Pyralgin tend to minimize the reactions considerably.

The most severe transfusional reactions are attributable to incompatibility of A B O or Rh Groups and are the most dreaded by clinicians. The clinical manifestations vary greatly among patients, depending upon the antibody concentration in the recipient's plasma.[2] The reaction may occur after the administration of as little as 25-50 ml. of blood or after the administration of 500 ml. of blood. A reaction in the conscious patient is manifested by severe hypotension, chills, pain in the lumbar area with nausea and vomiting and often involuntary urination or defecation. The initial reaction is rarely fatal; most commonly the patient will appear to improve for a few hours. The first urine sample passed after the hemolytic reaction will be dark, reddish-brown, contain protein, red cells, pigment and granular casts and give a positive benzidine test for blood. After the initial reaction, the patient may show a transient mild bilirubinemia with the onset of oliguria.

Last but not least, is the transmission of other diseases by blood transfusions of which infectious hepatitis and syphilis are the most significant. Despite the many screening tests available, it is impossible to definitely rule out all donors as carriers of hemolygous serum hepatitis. The virus resists storage at refrigerated temperatures as well as preservatives and heat.

All transfusion reactions, whether minor or severe, should be thoroughly investigated by the clinical blood bank. Upon completion of the blood transfusion, the blood should be returned for retyping and crossmatch against the original patient's sample. In addition, both an anticoagulated and clotted sample of blood should be drawn from the patient in order to recheck the A B O and Rh grouping as well as to check for the presence of antibodies. Bilirubin and plasma hemoglobin levels should be determined on the same sample. Urine samples collected from the patient at hourly intervals over a 24 hour period require examination for hemoglobin.

OTHER PROBLEMS

The final problem facing the physician, apart from indications for transfusion and reactions following transfusions, is the age old question of what to do in the presence of an antibody or an apparent incompatibility on crossmatch. First of all, let us consider the administration of blood

other than Group and Rh specific. If it is necessary to administer blood as a lifesaving procedure or if the individual is beyond the childbearing age or in the older age group, one might consider switching Rh Groups, for example, from AB positive to AB negative or vice versa. The possibility of developing antibodies is greatly lessened and the need for further transfusions is probably remote.

Secondarily, comes the question of the universal donor and universal recipient. Theoretically, low titer O bloods (universal donor) may be considered for all recipients; whereas an AB individual (universal recipient) may receive low titer O or packed cells of type A and/or B blood during emergency procedures.

In the case of incompatibility on both the major and minor sides of the crossmatch, one needs to recheck the blood group and Rh type of both donor and recipient. Providing these are correct, one can assume that the difficulty is probably due to either an auto-antibody or to a synthetic plasma expander such as dextran or amogen. Two avenues of approach can be taken: (a) careful elution of the material from the red blood cells through successive washing and heating or (b) administration of the most compatible unit of blood.

In the case of an incompatibility on the minor cell of the crossmatch, with A B O compatibility proved, one needs to consider an iso-antibody in donors serum, i.e. Rh, or auto-antibody of the recipient's cells. If the need for transfusion is of an emergency nature, the administration of packed cells reduces the risk.

Finally, is there ever an indication for a solitary unit of blood? Theoretically, one can dogmatically state that there are few indications requiring the administration of one unit of blood. However, often one unit of blood is required following surgical procedures to restore blood loss.

The benefits from needed blood transfusions are well known while the risks are either ignored or less widely known. Complications from unwarranted transfusions are a medical tragedy and could be irradicated by a more careful and complete evaluation of the patient's condition and type of transfusional therapy indicated. ★★★

2500 North State St.

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ALPINE EXTREMITIES

The physician's dinner partner at the party was a beautiful Swiss woman who spoke English through a thick French accent. Turning to amenities, he asked: "What part of Switzerland do you live in?"

"In ze norz," she responded pleasantly.

"What beautiful lakes you have," he commented.

"But how can you see zem?" she asked. "Zey are under ze table."

Radiological Seminar XL: Marginal Ulcer

OTTIS G. BALL, M.D.
Jackson, Mississippi

MARGINAL ULCERS may follow any type of surgical resection and anastomosis of the stomach and small bowel for peptic ulcer disease of the duodenum, but are uncommon following proper removal of a gastric ulcer. The terms marginal, stomach, anastomotic, and recurrent ulcer are synonymous.

Marginal ulcers usually occur at or just distal to the anastomotic site in the efferent limb of the jejunum in the case of a gastrojejunostomy, only rarely occurring on the gastric side of the anastomosis.

Following a simple gastrojejunostomy the occurrence rate is high, in some series being in the neighborhood of 35 per cent. The actual incidence of recurrent ulcer is difficult to determine with the various surgical procedures now in vogue, but appears to range between 2-6 per cent. The time of occurrence following surgery may vary from a few months to many years. The causative factors are felt to be: (1) an insufficient gastric resection, (2) incomplete vagotomy, or (3) a long afferent loop of jejunum. Occasionally, the recurrent ulcer may be a manifestation of an unusually virulent form of peptic ulcer disease, and the rare possibility of the Zollinger-Ellison syndrome with a nonbeta islet cell tumor of the pancreas should be kept in mind. Complications encountered in marginal ulcers are hemorrhage, perforation, and fistula formation.

The clinical diagnosis is based on recurrent pain, tenderness, nausea, vomiting, and hemorrhage following previous surgery for duodenal ulcer. Additional aids are gastric acid determination and gastroscopy.

The radiologic diagnosis of marginal ulceration may be quite difficult, with the reported incidence of accurate ulcer demonstration varying from 25 per cent to 65 per cent in different series. The difficulty in adequate evaluation lies in the fact that small ulcer craters may be easily hidden by prominent jejunal folds and because of the rapid transit of the barium from the small gastric pouch through the anastomosis and into the small bowel. Moreover, overlying loops of jejunum often obscure the area of interest on the postfluoroscopic films.

It is most important for the radiologist to be fully aware of the type of surgical procedure that has been performed prior to his fluoroscopic examination. Small quantities of barium should be used and pressure spot films obtained of the anastomotic site and of the proximal efferent loop of

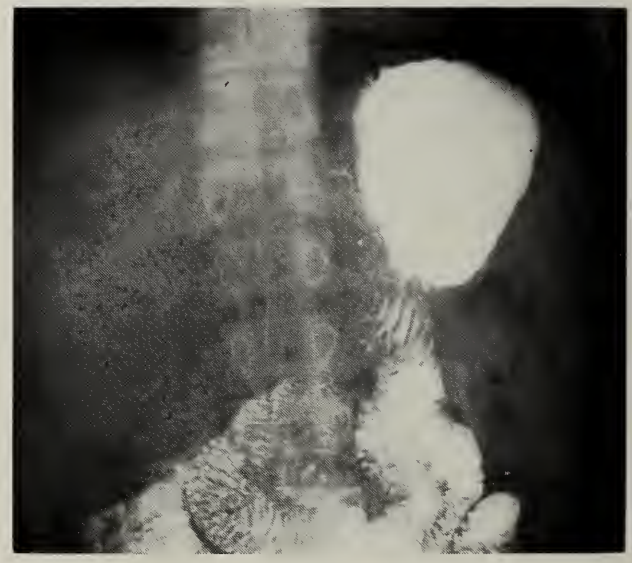


Figure 1. A film from a GI series on a 40-year-old white male obtained five weeks following a subtotal gastric resection for peptic ulcer disease, demonstrating a normal gastrojejunostomy.

Sponsored by the Mississippi Radiological Society.
From the Department of Radiology, University of Mississippi Medical Center.

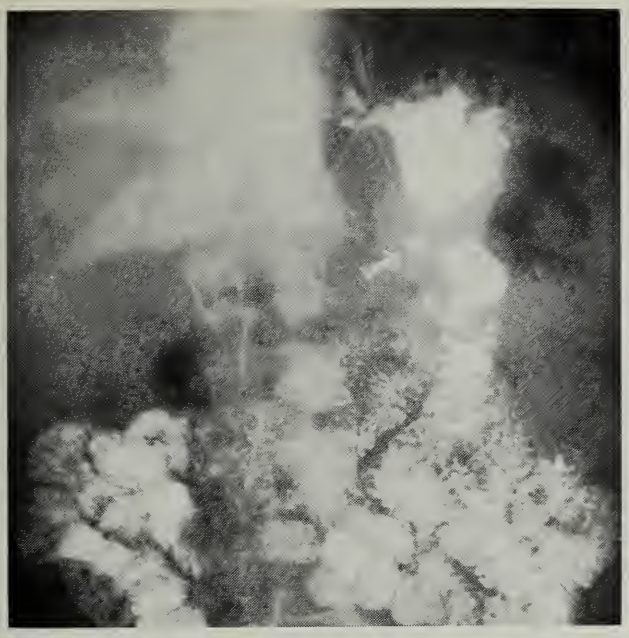


Figure 2. On a GI series on the same patient four years later, a marginal ulcer is clearly apparent (arrow). It is located in the typical position, lying in the jejunum just distal to the anastomosis.

jejunum. Important secondary signs of marginal ulceration may be present such as rigidity, narrowing at the anastomosis, dilatation of the afferent loop, or edematous jejunal folds near the ulcer site or an incisura on the opposite wall of the jejunum.

One of the most helpful procedures in the diagnosis of gastrojejunal ulcer is the practice of routinely performing a roentgen study on all patients who have been subjected to gastric surgery during the early postoperative period. The films of this study serve as a record of the postoperative anatomy and thus a base line is established for comparison with later examinations if such become necessary. ★★★

2500 North State St.

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Figure 3. A spot film from a GI series on a 30-year-old colored male, obtained one year post subtotal gastric resection, demonstrating a huge (4.5 cm.) marginal ulcer. Note the collar of inflammatory edema and reaction at the junction of the crater with the jejunum.

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AUTO-CRAT

The reason why a certain popular American car is quieter than a Rolls Royce is obvious: The latter is so expensive that its motor doesn't purr—it sneers.

Clinicopathological Conference LXVII

Conducted by the Department of Pathology
Houston Hospital
Houston, Mississippi

The patient in CPC LXVII is a 47-year-old white female who was admitted to the Houston Hospital with a chief complaint of a "big knot" in the abdomen of seven months' duration. The patient was well until November 1964 when she noticed a sensation of bloating in the abdomen, poor appetite, and generalized weakness. Physical examination at the time of admission revealed a rounded, discrete, nontender mass in the left upper quadrant, measuring 11-13 cm. in diameter.

Discussers are Drs. M. C. Sappington, R. H. Roberts, Roy F. Harmon, Jr., L. M. Conley, Van B. Philpot, Jr., Edward Gore, John D. Dyer, and W. J. Aycock.

Dr. M. C. Sappington: "This patient is a 47-year-old, white female, last admitted to the Houston Hospital April 28, 1965, with a chief complaint of a 'big knot' in the abdomen of seven months' duration.

"The patient was perfectly well up until November 1964 when she noticed a sensation of bloating in the abdomen, poor appetite, and generalized weakness. There was no nausea, vomiting, diarrhea, or constipation, hematemesis or bloody or tarry stool. Approximately one week after the onset of symptoms she palpated a mass in the left upper quadrant of the abdomen and was admitted to the Houston Hospital on Nov. 16, 1964.

"Physical examination at this time revealed a rounded, discrete, nontender mass in the left upper quadrant, measuring 11-13 cm. in diameter. The perineum was relaxed and the cervix lacerated.

"Laboratory data were as follows: RBC, 4,610,000; hemoglobin, 14.2 gm.; hematocrit, 42 per cent, WBC, 3,300 with 59 segmented neutrophils, 39 lymphocytes, 2 eosinophils, blood platelets, 106,030. Urinalysis was essentially normal and serology nonreactive.

"A plain film of the abdomen revealed soft tissue enlargement consistent with spleen. An intravenous pyelogram was essentially normal and a colon examination was essentially normal.

"Bone marrow examination revealed an increase of myeloblasts and promyelocytes with a 1-8 leukocyte/nucleated RBC ratio. The marrow was reported as suggestive but not diagnostic of an early myelocytic leukemia and a follow-up was recommended.

"Following discharge from the hospital on Nov. 21, 1964, the patient's weakness increased to the point that she was unable to work. She was admitted the second time on Dec. 13, 1964. Complete blood count at this time was as follows: hemoglobin, 13.4; hematocrit, 39; WBC, 2,700 with 59 segmented neutrophils, 39 lymphocytes, 2 eosinophils. No definitive diagnosis or treatment was given, and she was discharged on Dec. 17, 1964.

"Her third hospital admission was on Dec. 31, 1964, with symptoms essentially unchanged. At this time, her hemoglobin was 12.4 gm.; hematocrit 36 per cent; WBC, 3,950 with 46 segmented neutrophils, 16 stabs, 3 juveniles, 5 eosinophils, 27 lymphocytes, 3 monocytes. Bone marrow was reported as nondiagnostic, and she was discharged Jan. 4, 1965.

"She was seen again as an outpatient on Feb. 7, 1965, feeling much improved without definitive therapy. Laboratory consultant No. 1 was uncertain of the interpretation of the blood smear and referred all material to consultant No. 2, who concluded that the patient had chronic myelogenous leukemia which had gone into a subacute phase. Accordingly, on March 20, 1965, she was placed on Myleran, 2 mg. daily, for 14 days, and improved subjectively.

"On April 17, 1965, a CBC revealed WBC, 3,600; hemoglobin, 13.8 gm., and all bone mar-

row and blood smears were referred to laboratory consultant No. 3. The difference of opinion of the three consultants is emphasized by variations in interpretation of blood smear of Feb. 5, 1965, outlined in Table 1.

TABLE 1

DIFFERENTIALS OF THREE CONSULTANTS ON BLOOD SMEAR DATED FEB. 5, 1965

Normal		*Consultant No. 1*	*Consultant No. 2*	*Consultant No. 3*
	Stem Cell			
	Progranulocyte		8	
	N. Myelocyte	4	7	
	N. Metamyelocyte	12	11	
0-5	N. Band	31	28	6
50-70	N. Segmented	29	17	58
1-5	Eosinophil	2	1	4
0-1	Basophil	3		2
20-40	Lymphocyte	17	1	14
2-8	Monocyte	2		18
	Plasmocyte			
	Microblasts		27	

Interpretation of blood smears and bone marrows:

Consultant No. 1. Uncertain—Favored myelocytic leukemia.

Consultant No. 2. Subacute phase of chronic myelogenous leukemia.

Consultant No. 3. Not diagnostic and not suggestive of leukemia.

"There had been no appreciable change in size of the spleen and her feeling of weakness much improved on her last admission of April 28, 1965.

PAST HISTORY

"Twelve years prior to admission she had developed hemorrhage in the throat and a local physician sent her to a private clinic in Memphis with a suspect diagnosis of tuberculosis. She was discharged with no definitive diagnosis.

"Eleven years ago a State Mobile X-ray Unit revealed a suspicious lesion in the chest. She made several trips to the State Sanatorium and University Hospital in Jackson and was told she had 'gland trouble' that might flare up in the future but was of no consequence at present. Ten years ago she was treated as an outpatient for vague discomfort and abdominal pains. No definitive diagnosis was made and no masses were noted.

FAMILY HISTORY

"The patient was married and had four children, living and well. Her father, age 74, had 'low blood' and a weak heart. Her mother, two brothers, and one sister were living and well. There was no family history of diabetes, tuberculosis, or cancer.

PHYSICAL EXAMINATION

"The mass in the left upper quadrant of the abdomen had not changed in size. The patient appeared pale and mildly and chronically ill. There was no lymphadenopathy. The physical examination was otherwise noncontributory. A chest x-ray on the last admission revealed prominence of markings bilaterally with no definitive diagnosis. On April 29, 1965, a splenectomy was performed."

DISCUSSION

"There are numerous causes of splenomegaly and in this particular case splenomegaly and a leukopenia are apparently the only consistent findings. Apparently, one can rule out bacterial and viral infections that frequently cause the spleen to enlarge, since there is no mention of fever. However, there are the chronic granulomatous diseases to consider, such as tuberculosis, histoplasmosis, or brucellosis, in which case the spleen may become very large with the hematological changes of hypersplenism ensuing.

"Hypersplenism is a syndrome characterized by the increased destruction of normal blood cells by a malfunctioning spleen with possible inhibition of the bone marrow. Thus an anemia, neutropenia, thrombocytopenia, or any combination of these may develop. We do not need to consider the various diseases with secondary hemolytic anemias since this patient did not develop anemia or the more rare splenic pancytopenias. However, there is a form of dysplenism with enlarged spleens and increased destruction of neutrophils or platelets, or both (primary splenic neutropenia) and there is Felty's Syndrome characterized by rheumatoid arthritis and leukopenia. There is another form of dysplenism, chronic congestive splenomegaly, but this syndrome, formerly called Banti's Syndrome, is characterized by portal hypertension, gastrointestinal hemorrhage, anemia, leukopenia, and thrombocytopenia. Tumors of the spleen are rare but do occur and are difficult to diagnose preoperatively.

"Of course, we must consider the leukemias as a cause of splenic enlargement and here we can rule out the acute leukemia. There is a form of chronic myelogenous leukemia designated as aleukemic in which abnormal leukocytes do not appear in the peripheral blood, even in carefully performed differential counts. In this particular case there was disagreement among the consultants concerning the bone marrow picture, but

the patient apparently improved on Myleran, a brand of busulfan which even in aleukemic leukemia may sometimes initiate improvement but usually with a decrease in size of the spleen as well as bone marrow improvement. There was no mention of lymph node enlargement in this particular patient.

"After reviewing the clinical summary, I must consider hypersplenism (more particularly primary splenic neutropenia), chronic myelogenous leukemia, a primary tumor of the spleen, or a granulomatous disease, such as tuberculosis or histoplasmosis.

"In view of the inconsistent findings, I feel that this patient did not have aleukemic leukemia, and in view of the bone marrow depression I did not feel that this was a primary tumor of the spleen. I am left with a form of hypersplenism or a granulomatous disease. I am in favor of primary splenic neutropenia, although previous x-rays of the chest might have been lesions of histoplasmosis, even though present x-rays were negative. If rheumatoid arthritis had been mentioned, I would lean to Felty's Syndrome."

CLINICAL DISCUSSION

Dr. Sappington: "Are there any questions?"

Dr. R. H. Roberts: "Was this your patient?"

Dr. Sappington: "No."

Dr. Roberts: "Was this patient ever in the tropics?"

Dr. Sappington: "I only had the information given in the clinical summary, with no information of having been in the tropics. I did not consider kala-azar or parasitic diseases of a tropical nature."

Dr. Roy F. Harmon, Jr.: "Was the patient improved by the Myleran?"

Dr. Sappington: "The patient improved subjectively. Laboratory findings after Myleran were essentially the same."

Dr. L. M. Conley: "I would like to comment on the x-rays—they were not negative, so that may help you. X-rays on the initial admission showed on the plain films a mass in the left upper abdomen consistent with an enlarged spleen. IVP's showed that the mass was separate from the kidney. The colon examination showed that it was separate from the colon. The x-rays suggested that this was an enlarged spleen. Chest films taken on two dates show increased markings extending from both hilar areas towards the mid and upper lung fields with there being also some other increased markings in the left upper lung having a slight suggestion of a cystic appearance, which could possibly indicate some bronchiectasis. Findings appear to be of a chronic nature, the exact etiology not being determined."

Dr. Sappington: "I would like to change my opinion after seeing the films. As there were some markings bilaterally, I feel this is probably a chronic granulomatous lesion of the spleen, such as tuberculosis or histoplasmosis."

Dr. Van B. Philpot, Jr.: "Would you care to mention any other granulomatous lesion?"

Dr. Sappington: "Boeck's sarcoid."

Dr. Harmon: "I would like to say that I think that was a very good presentation, and I would like to stick to the primary splenic neutropenia as a primary etiology."

Dr. Edward Gore: "Were there any blood chemistries done?"

Dr. Philpot: "The calcium level on June 30 was 6.2, mEq/L with a normal range of 4.5-5.75. Total protein and A/G ratio were normal."

Dr. Gore: "I favor the diagnosis of Boeck's sarcoid."

Dr. Harmon: "In the information you have in hand, has the patient had any adrenalin? I notice in reviewing this, in some literature you get a leukocytosis after the use of adrenalin in hypersplenism. Was that done?"

Dr. Philpot: "I don't think so. Dr. Dyer, would you comment."

Dr. John D. Dyer: "No, adrenalin was not used."

"To me, this case demonstrates the great differences of opinion and shows how much less is known about the white blood cells than is known about the red blood cells. As the surgeon involved in this case, I could not see how an acute or a subacute leukemia could go along for a period of seven months with general improvement. Because of this, I was inclined to go along with the consultant who did not think this was leukemia and felt that surgery might benefit this patient."

Dr. Gore: "Did you x-ray the hands?"

Dr. Conley: "Yes, they looked normal."

Dr. W. J. Aycock: "Have there been tests for malaria?"

Dr. Philpot: "No malaria parasites were seen on blood smears."

PATHOLOGIST'S REPORT

Dr. Philpot: "The spleen weighed 850 gm. The external surface was finely granular, reddish-gray, and moderately firm and wrinkled only with great difficulty on pressure. On cut section the color was dark red and granules measuring about 1 mm.

each were seen throughout. Some of these granules were dark red while others were light tan in color. Malpighian corpuscles were not apparent. A small (1.0 cm.) accessory spleen was also noted.

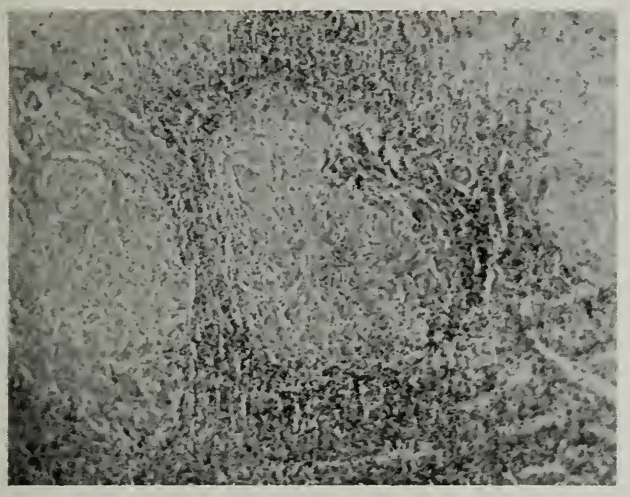


Figure 1. Noninfectious granuloma (Boeck's sarcoid) of spleen.

"Microscopic section (Figure 1) revealed spherical aggregates of epithelioid cells throughout the spleen. These cells were frequently angular in shape with uniform spherical nuclei and an abundant acidophilic cytoplasm. Many cells were joined by these strands of cytoplasm. There was no caseous necrosis and no Langhan-type giant cells seen. In some areas hemorrhage and fibrosis are noted indicating that the spleen ultimately would have become nodular and contracted.

"These findings tend to support the conclusion of laboratory consultant No. 3, who reported the peripheral blood cells in question as monocytes.

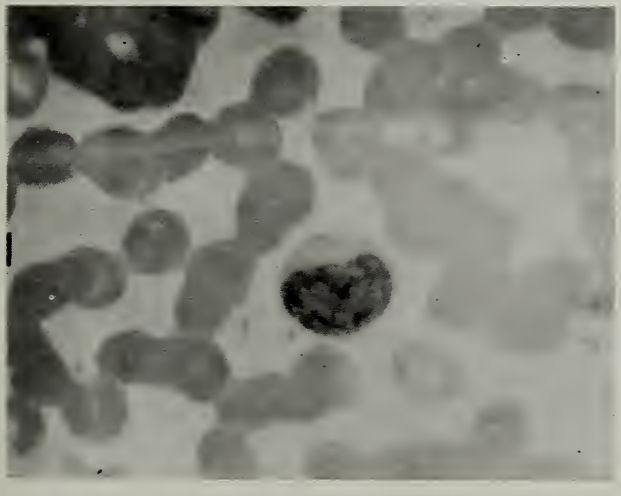


Figure 2. Atypical monocyte in peripheral blood smear.

Many of these cells, however, are atypical with nuclei containing discrete, spherical areas suggesting ill defined nucleoli (Figure 2). These nuclei also lacked the brain-like convolutions characteristic of many mature monocytes.

"Acid fast, PAS, and silver methenamine stains of the spleen revealed no pathogenic organisms capable of causing this granuloma. The final diagnosis, therefore, is a noninfectious granuloma consistent with Boeck's sarcoid.

"A follow-up on the patient 60 days after surgery revealed marked improvement in symptomatology. The WBC was 12,450 with 2 eosinophils, 37 segmented neutrophils, 55 lymphocytes, and 2 monocytes. The atypical monocytes noted previously were exceedingly rare. The platelet count was 329,810; hemoglobin, 14.7 gm. and hematocrit, 44 per cent. The pressure in the abdomen was relieved, the patient returned to work.

"The term 'splenic neutropenia' is applicable to this patient, but it is not a definite diagnosis. The patient had a panhematopenia involving white cells, red cells, and platelets, which was apparently cured by splenectomy. The mechanism of pancytopenia might be sequestration and phagocytosis within the spleen (Doan and Wiseman) or marrow inhibition by hormonal regulation (Dameshek).[1]

"Except for questionable pulmonary involvement, the spleen is apparently the only organ involved by sarcoid in this patient. Longcope and Freiman[2] in a study of 160 cases of sarcoidosis and an extensive review of the literature report occasional cases of sarcoidosis that were improved by splenectomy. Splenectomy in other instances, however, seems to have had little or no effect on the course of the disease. Becker and Coleman[3] consider splenectomy in sarcoidosis indicated when there is rupture of the spleen, abdominal discomfort due to splenomegaly, and persistent thrombocytopenia and pancytopenia.

"In summary, this patient had sarcoidosis of the spleen with panhematopenia, which apparently was cured by splenectomy. A small accessory spleen was also noted, which was unremarkable." ★★★

Special stains of the spleen were prepared through courtesy of Dr. Joel Brunson. Mr. Paul J. Rau at the University Medical Center, Jackson, kindly prepared the photomicrographs.

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Proceedings of the House of Delegates

97th Annual Session
May 10-13, 1965
Biloxi, Mississippi

THE 62ND ANNUAL SESSION of the House of Delegates was convened during the 97th Annual Session of the Mississippi State Medical Association, in pursuance to lawful notice given, on May 10, 1965, on the Fountain Terrace of the Hotel Buena Vista at Biloxi, Mississippi, at 1:30 o'clock in the afternoon, by Dr. Omar Simmons, the President. The invocation was spoken by the Rev. Olin G. Beall, Rector of the Episcopal Church of the Redeemer, Biloxi, Mississippi.

After extending greetings, Dr. Simmons presented the Vice Speaker of the House of Delegates, Dr. William E. Lotterhos of Jackson, and the Speaker, Dr. Howard A. Nelson of Greenwood, who assumed the chair. Dr. James L. Royals, Chairman of the Reference Committee on Credentials, reported the presence of a quorum of registered and seated delegates in accordance with Section 3, Chapter V, By-Laws of the association.

ACTION OF THE HOUSE OF DELEGATES

The Speaker, Dr. Nelson, announced with regret the absence of the Chairman of the Board of Trustees, Dr. John B. Howell, Jr., of Canton, because of the death of his mother, reading a message from him. On motion by Dr. A. L. Gray of Jackson, seconded by Dr. Guy T. Vise of Meridian, the House voted unanimously to send Dr. Howell an expression of deep sorrow and condolence.

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REPORT OF THE REFERENCE COMMITTEE ON RULES AND ORDER OF BUSINESS

To assist the Speaker and Vice Speaker in the orderly conduct of the proceedings of this House of Delegates, your Reference Committee on Rules and Order of Business makes the following recommendations:

Conduct of Business. The business of the House should be conducted according to *Robert's Rules of Order, Revised* and the Speaker and Vice Speaker should prescribe the order of business as

set out in the By-Laws. To insure proper recording of the transactions, all delegates recognized should identify themselves. Except for distinguished visitors and those having official capacity in the association, unanimous consent should be obtained for extending the privilege of the floor to non-members of the House of Delegates. The report of the Reference Committee on Credentials should constitute the formal roll call.

Reports. All reports and resolutions presented should be referred to the appropriate reference committee by the chair immediately after their presentation, the only exception being those which are of such a nature as to require no further consideration and are, therefore, ready for decision by vote of this House. Reports should be identified by title and number and read clearly. Debate should be reserved until such time as the reference committees conduct formal hearings and when they report to this House.

Resolutions. To avoid burdensome tasks upon the reference committees and to insure that all interested members have adequate opportunity to discuss their views, the House should permit no introductions of resolutions after the present meeting except for (1) matters of an emergency nature, the validity of such emergency to be determined by majority vote, (2) matters relating to a scientific section or scientific work, and (3) proposed amendments to the Constitution and/or By-Laws which must lie on the table for one year.

The report of the reference committee was adopted.

ADOPTION OF TRANSACTIONS

On motion by Dr. Stanley A. Hill of Corinth, seconded by Dr. R. J. Moorhead of Yazoo City, the Transactions of the 61st Annual Session of the House of Delegates, 96th Annual Session of the association, Jackson, May 11-14, 1964, published in Volume V, Number 8, JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION, August 1964, were adopted.

REMARKS OF THE SPEAKER

Dr. Howard A. Nelson: In 1965, the formal discharge of medicine's duties and responsibilities in Mississippi enters its 109th year. For the 62nd time, this House of Delegates has been convened to review the accounting of stewardship, to consider proposals, to face crucial issues, and to chart a course for the ensuing year. This is no self-seeking labor nor is it an endeavor of limited interests. We are here as physicians, representing other physicians, and acting—as we are given the light to see and the means to do—in the interest of the public, its health, and wellbeing.

This is easier said than achieved, for we pursue worthy goals amid pronounced difficulty. American medicine has almost become acclimated to the paradox and the dichotomy. On the one hand, medical science builds its pyramid of knowledge and capability with three stones in the fund of knowledge supporting the next two which, in turn, support another. The task, as though not difficult enough unto itself, is made more arduous by artificial burdens thrust upon the builders by those who do not wish us well.

Our achievements are hailed, but our method is sometimes decried.

Our trusteeship of health is neither lightly taken nor cursorily regarded. To increase our capacities, to save the benefit of each other's counsel, to combine our resources, in short, to do those things together which alone we cannot do for ourselves, we have our Mississippi State Medical Association. Throughout the years, our several official bodies have addressed themselves to varied and specialized challenges and tasks in behalf of all. Our officers have put themselves about their respective constitutional duties, and our governing board has worked on a week to week and month to month schedule of management responsibility.

The annual session is the logical climax of these activities. Of course, our association remains primarily scientific, as it must and shall remain. But without formal development of policy, without knowledge which has been sought and sifted, without direction, and without debate over all these things, we could not do together any more than we could do alone.

As delegates, many of us have participated in these continuing tasks, while some are just now beginning to contribute to the work of this deliberative body. Your Speaker and Vice Speaker have as their sole mission the fair and just guiding of these deliberations. We shall try to provide for the orderly climate in which they are carried out. We do not have as our purpose nor within our prerogative the charge of telling you what to do nor how to do it. We are concerned with the manner and means by which your decisions are made. Toward the end of serving this goal, of assuring each member of the House his or her privileges, of assisting—without influencing—the efficient and unimpeded disposition of business, we pledge you our best.

A few suggestions are respectfully offered, and in stated circumstances, your cooperation is earn-

estly sought. Most of us are not accomplished parliamentarians, but we are fair and sincere in our representations. When the chair has reason to believe that discussion is not relevant to the business properly before the House, an appropriate ruling will promptly be made. At the same time, neither your Speaker nor Vice Speaker claims infallibility, and your right of challenge will be recognized with equal promptness.

As in the case of the American Medical Association, most national specialty societies, most state medical associations, and even legislative bodies of political subdivisions, we reserve nearly all of our debate for reference committee hearings. This has many advantages: First, any member may be heard in committee, whereas only members of this House may claim the floor in the absence of lawful permission. Second, the time of the House is conserved by providing opportunity for those most interested and most knowledgeable to place their views before the entire body, while the time of others is accordingly conserved.

Your Speaker urges each member to attend and participate in the work of the reference committees. Nothing is more discouraging to a committee and to those who have patiently debated issues before it than to have a member arise on the last day with repetitious debate when he did not darken the door of the hearing room. This is not to say that floor debate is out of order, but it is to say that we contribute much more by assisting the committee in finding the consensus which each will conscientiously seek.

We further implore you to keep the parliamentary procedure as simple and direct as possible. Often, an opponent or proponent makes a substitute motion exactly opposite to the main motion. Assuming that he is in the minority, he has needlessly taken the time of the majority and accomplished little for his effort. Many a good question has been lost or thwarted by a tangle of motions, only to be laid on the table by those weary or uncertain of the outcome. Where possible, let us address ourselves to main motions, for or opposed, thus assuring that we contribute to the enlightenment and not the entanglement of questions before us.

Your Speaker and Vice Speaker have introduced various innovations which we hope are found to add to your convenience and pleasure of serving in this House of Delegates. In addition, we place ourselves at your service in the work of the several reference committees, referrals which we have made, and in connection with resolutions and other presentations to the House.

Let us now be about the business of medicine with reason and resolve which will insure success in these important endeavors.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Each member of the House of Delegates appreciates the competent and sincere manner in which the business of our policymaking body is conducted by our Speaker and Vice Speaker. In approving the remarks of the Speaker, we add our commendation to Drs. Nelson and Lotterhos. The report of the reference committee was adopted.

OPEN SESSION OF THE HOUSE OF DELEGATES

The House of Delegates entered upon open session during which various distinguished guests were presented by the Speaker.

ADDRESS OF THE PRESIDENT

The President of the association, Dr. Omar Simmons, delivered his address to the House of Delegates. The address has been published separately in Volume VI, Number 7, JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION, July 1965.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee heartily and enthusiastically commends our President, Dr. Omar Simmons, on his splendid address to the House of Delegates. We support his viewpoints and we believe that each member of our association should carefully consider the sincere message contained in his paper.

We believe it important to emphasize the doctrine which he has offered our association: "The profession of medicine, in keeping with its historic traditions and commitments, assures its services to all in need of medical care. In voluntarily assuming this responsibility and giving this assurance, physicians reserve to themselves the rights of property they have lawfully acquired through training and licensure. These may not be bartered or sold, conveyed or guaranteed without the willing consent of the practitioner who shall remain free to decide for himself the circumstances under which his professional services are rendered."

Dr. Simmons has raised pertinent and challenging questions which affect not only the scientific community but the public as well. Your reference committee approves the address of the President

and recommends that it be published in our JOURNAL.

The report of the reference committee was adopted.

SPECIAL ADDRESS

Dr. Wesley W. Hall of Reno, Nevada, Vice Chairman of the Board of Trustees, American Medical Association, addressed the House of Delegates.

ANNOUNCEMENT BY THE PRESIDENT

The President, Dr. Simmons, announced the resignation of Dr. Everett H. Crawford of Tylertown as District 8 Trustee because of his approaching inauguration as President of the association and the appointment of Dr. G. Swink Hicks of Natchez to serve Dr. Crawford's unexpired term as a member of the Board of Trustees.

REPORT OF THE COUNCIL ON CONSTITUTION AND BY-LAWS

Dr. E. LeRoy Wilkins: Prior Reporting and Actions. At the 96th Annual Session at Jackson in 1964, your Council on Constitution and By-Laws reported that there were no pending amendments to the Constitution. Two amendments to the By-Laws were proposed by your council and one, by the Board of Trustees. Each was adopted by the House of Delegates. These amendments were:

(a) *Committee on Medicine and Religion.* Chapter X of the By-Laws was amended to provide that the Committee on Medicine and Religion is a constitutional body of the Board of Trustees.

(b) *Procedural Amendment.* Section 2, Chapter V of the By-Laws was amended to require that the House of Delegates meet on the first day of the annual session.

(c) *Eligibility for Membership.* Section 1, Chapter I of the By-Laws was amended to make membership eligibility contingent upon the status of the physician's federal narcotics stamp.

Present Reporting. At the close of the 96th Annual Session, there were no pending amendments to the Constitution and By-Laws. This was announced to the component medical societies of our association 60 days prior to the present annual session. Your council will sit as a reference committee and conduct open hearings on any matters referred to us by the House of Delegates at the time and place announced in the official program.

ACTION OF THE HOUSE OF DELEGATES

No proposed amendments to the Constitution or By-Laws were introduced at the opening meeting of the House of Delegates, and hearings and formal action by the council were not necessary. The report was received for information.

REPORT OF THE BOARD OF TRUSTEES

Dr. C. D. Taylor, Jr.: Organization and Duties. The Board of Trustees is the executive and governing body of the association during vacation of the House of Delegates. It is responsible for management and policy direction of all phases of association activity. In the discharge of these responsibilities, the Board conducted formal meetings in May, August, and December of 1964, and in January, April, and May of 1965. This annual report relates to management, policy functions, and Board-supervised programs deemed important to the membership and House of Delegates.

Referrals to the Board. Matters referred to the Board at the 96th Annual Session in 1964 included:

(a) *Loss of Narcotics Stamps.* After conducting and reporting studies on qualification and eligibility for membership as relate to the use and dispensing of narcotics, the Board recommended that the By-Laws be amended to deny membership eligibility to physicians not possessing currently effective federal narcotics stamps except for those in government service who need no registration and those who, by reason of type of practice, employment, inactivity, or retirement, neither prescribe nor dispense narcotics and who for this reason alone have not applied for registration. The amendment was approved, and at the request of the Board, the Secretary-Treasurer communicated this information to each component medical society. This proscription has been invoked at the local level, and formal action in this respect at the state level has not been indicated.

(b) *Sanction of Voluntary Health Agencies.* Following adoption of the policy that the association neither approves nor disapproves of any established, legitimate voluntary health agency but rather offers such organizations guidance and medical advice when desired, agencies previously approved were informed of the action of the House of Delegates, and no new applications for approval have been entertained. Relations with the several voluntary health agencies continue to be cordial and satisfactory.

(c) *Supplemental Report D.* The House of Delegates acted favorably on the Board's approval

of an amendment to the charter of the component medical society in Copiah, Franklin, Lawrence, Lincoln, Pike, and Walthall Counties, redesignating it the South Central Mississippi Medical Society from its former designation, the Tri-County Medical Society. Evidence of the amendment was furnished the society, and the records of all members were accordingly reclassified.

(d) *Resolution No. 9, Medical Care for the Indigent.* Studies and recommendations in this connection are the subjects of a supplemental report.

(e) *Resolution No. 10, Blue Shield Fees.* Deliberations, findings, and recommendations of the physician-directors of Blue Cross-Blue Shield, as reported to the Board, are contained in a supplemental report.

(f) *Resolution No. 11, Trustee Emeritus.* In a special ceremony conducted August 5, 1964, at Columbus, Mississippi, the Board of Trustees formally conferred upon Dr. H. H. McClanahan, Jr., an appropriate certificate attesting to the honor voted him by the House of Delegates and invested him with the title, Trustee Emeritus.

(g) *Medical Aspects of Driver Limitation.* During the 1964-65 association year, the Board developed and implemented a program on medical aspects of driver limitation at the request of the state of Mississippi. The program is fully described in a supplemental report.

Committees of the Board of Trustees. The Board is assisted in its work by four constitutional and five *ad hoc* committees. Four of the eight councils are responsible to the Board for reporting purposes.

(a) *Grievance Committee.* Functioning in an appellate and supervisory capacity, the committee reported processing seven cases during the year. Two were intraprofessional in nature, one of which involved an out-of-state physician and is being processed by another medical organization. Two related to fees, one to service, and two were in miscellaneous categories. The Board notes with satisfaction that it was not necessary for the committee to assume original jurisdiction in any instance which reflects credit upon the grievance committees of component medical societies.

(b) *Committee on Publications.* The three appointed members, the Editor, and the two Associate Editors have received the Board's thanks and commendation upon reporting completion of our JOURNAL's fifth year of publication. The national decline in ethical advertising seems to have been somewhat arrested, and the trend in local advertising is upward. The variety and number of original scientific essays remains substantial, and the JOURNAL is useful in furnishing a vehicle for publication of various reference and record data to the membership. In 1964, two special, single topic issues were published: Sterilization and contraception, February, and health quackery, September. Volume V included the work of 104 authors apart from unsigned news items and department features.

(c) *Committee on Medicine and Religion.* Although organized and operational since 1963, this committee has concluded its first year as a constitutional body of the association. Among its current programs are compiling of reference sources for each member of the committee, local programs designed to increase communication between physicians and clergymen, continuing liaison with the AMA Department of Medicine and Religion, and assistance to component medical societies in this area of activity. The Board has noted with pleasure that many state medical associations are presenting symposia during the present year patterned after the 1963 symposium presented by your association at the 95th Annual Session.

(d) *State Medicare Review Board.* In overseeing the association's function as contractor and fiscal administrator for the Dependents' Medical Care Program, this body reports a diminution in claims volume of about 17 per cent in 1964 over the preceding year, the result of the closing of military installations and strength reductions in the armed services. Physician participation increased slightly over 1963 with 58 per cent of all Mississippi practitioners rendering these services. The rate of formal claims review decreased. The Board of Trustees commends the members of the Review Board for their effective service during frequent meetings without either expense reimbursement or compensation.

(e) *Other Ad Hoc Committees.* The selection of the recipient of the 1965 MSMA-Robins Award will be announced at the adjourned meeting of the House of Delegates. The three vice presidents comprise this selection body. The Committee on Legislative Liaison, concerned primarily with state legislation, has had no occasion to conduct activity because of vacation of the Legislature. The MSMA-Mississippi Hospital Association Liaison Committee oversees communication between the two associations, and joint endeavors are being reported separately. The work of the new *ad hoc* Committee on Medical Aspects of Driver Limitation is presented in another report.

Legislative Activities. During the 1964-65 association year, the Council on Legislation re-

ported to the Board of Trustees on six occasions in connection with the work of the 1964 regular session of the Legislature and the 88th and 89th Congresses.

(a) *State Legislation.* The 1964 regular session adjourned on June 12, 1964, becoming the longest such session since 1870. Of 2,004 introductions before both houses, 70 bills related to matters of health and medical interest. Among these, 28 were enacted and 42 failed. The association supported 12 measures, six of which were passed. We opposed eight bills, all of which were defeated. The most significant enactments supported by your association were the enabling act for Kerr-Mills and amendments to the Medical Practice Act relating to suspension and revocation of license to practice medicine. Among measures defeated which your association opposed were proposals to license the cult of chiropractic, define the practice of nursing, and legislation seeking to regulate administration of intravenous fluids.

(b) *Emergency Medical Care Unit.* The EMCU, a unique service to the Legislature, was operated at the Capitol during the periods January 28—June 6 and June 23—July 15, 1964, the respective spans of the regular and special sessions. In this activity, 74 doctors of the day from 42 counties rendered 94 days of service during 23 weeks of the sessions. Both sessions unanimously passed concurrent resolutions commending the state medical association for this service. Your Board of Trustees has authorized the Council on Legislation to offer this service again in the 1966 regular session.

(c) *National Legislation.* The administration-sponsored H. R. 6675, Social Security Amendments of 1965, which includes a basic hospital program under Social Security but which separates physicians services into a voluntary insurance program, was passed by the House of Representatives on April 8, 1965, and is pending before the Senate at the present reporting. At its regular spring meeting, the Board of Trustees adopted legislative positions on other pending bills on recommendation of the Council on Legislation. Support has been given H. R. 2, Drug Abuse Control Amendments, which exempts physicians from records accounting of stimulant and depressant drugs, and to H. R. 10, Amendments to the Keogh-Smathers Act, which would liberalize the previously enacted Keogh voluntary retirement program.

Opposition was voiced in connection with federal funding programs for loans to group practice or closed panel medical facilities, health research facilities, initial staffing of community mental health centers, medical education, the facilities network for research and treatment of heart disease, cancer, and stroke, and water pollution control amendments which divest medical sources of this function.

No position was taken on pending legislation before the Congress on veterinary medical education facilities construction, community health services amendments (school health, immunization against measles and other infectious diseases, schools of public health, and studies in new methods of health services outside of hospitals), and the proposed medical library assistance act.

Court Litigation. On October 19, 1964, the Mississippi Supreme Court heard arguments on the appeal of the plaintiff in the case styled *State Board of Optometry v. Charles Chester* in which your association intervened as *amicus curiae.* On December 7, the Supreme Court rendered its decision, affirming the ruling of the trial court, which decision was most satisfactory to your association. In no way did the decision adversely affect the practice of medicine or practice procedures of ophthalmologists. Moreover, the decision stated that neither an optometrist or optician may use medicines or treat the human eye.

The plaintiffs, the State Board of Optometry, filed a suggestion of error which the Supreme Court overruled on February 1, 1965. The court further strengthened its prior ruling by stating that opticians are engaged in no unlawful practice in filling prescriptions and fitting glasses when the patient is required to return to the practitioner. The matter has been concluded, since there is no constitutional issue furnishing a basis for appeal to the United States Supreme Court. The Board of Trustees is glad to have been able to oversee this four years of litigation which related specifically to our colleagues in ophthalmology and to all physicians in legal potential. The Board asks that the House of Delegates associate itself in commending our legal counsel, Hon. Carl C. Bostic of Jackson, whose formal briefs and oral arguments in our behalf before the Supreme Court exerted profound influence on the outcome of the case.

Group Insurance Programs. The Board periodically reviews the group programs available to the membership from Blue Cross, the Continental Casualty Co., and the St. Paul Companies. On April 1, the Board was pleased to announce the third premium rate reduction in the professional liability insurance program since 1961. The overall reduction is about 50 per cent with dollar sav-

ings on recommended liability coverage of as much as $135 per year for those performing surgery and $57 per year for non-surgeons. Because of a loss-ratio experience exceeding total income from premiums, it was necessary to permit an upward adjustment in the Continental catastrophic hospital program. Even with this increase, however, the coverage is still available to members at a lower cost than is enjoyed by national and regional medical organizations for the same coverage.

Membership of the Board. During the 1964-65 association year, the Board welcomed the new District 3 Trustee, Dr. J. T. Davis of Corinth. Officers of the Board have been Drs. John B. Howell, Jr., chairman; Lamar Arrington, vice chairman; and C. D. Taylor, Jr., secretary.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee is particularly impressed by the enormousness of the undertakings of our Board of Trustees. We are indebted to them for their individual and joint exercise of leadership and effective service in behalf of the medical profession in Mississippi. The annual report of the Board outlines the work of its constitutional and *ad hoc* committees as well as ongoing programs which are supervised by our governing body.

Your reference committee particularly invites attention to that section of the report entitled "Loss of Narcotics Stamps." We request that the Mississippi State Board of Health establish close liaison with our Board of Trustees with respect to loss of narcotics stamps by physicians and ask that there be a free exchange of information in this connection. We appreciate the work conducted by the Board of Trustees with respect to state and national legislation and your reference committee reaffirms in the strongest terms our opposition to the compulsory inclusion of physicians under Social Security as proposed in H. R. 6675 now pending before the Senate. Furthermore, we reaffirm our opposition to the Douglas Amendment which would define the practice of anesthesiology, pathology, radiology, and physiatry as hospital service. We believe that the association should reject any definition in law which would seek to portray the practice of any medical discipline as a hospital service.

We approve the annual report of the Board of Trustees and recommend its adoption.

The report of the reference committee, as amended by Dr. Lawrence W. Long of Jackson to add the words "of Trustees" in the third sentence of the second paragraph, was adopted.

SUPPLEMENTAL REPORT "A" OF THE BOARD OF TRUSTEES

Dr. C. D. Taylor, Jr.: Background. At the 96th Annual Session in 1964, Resolution No. 9, subject: Medical Care for the Indigent, was introduced by Dr. C. D. Taylor, Jr., of Pass Christian in behalf of the Coast Counties Medical Society. The resolution follows:

WHEREAS, The 1964 Regular Session of the Mississippi Legislature has enacted House Bill 135, relieving physicians from joining in the determination and certification of the indigency of persons qualifying for indigent hospital care under the State Hospital Commission program, and

WHEREAS, Private physicians were formerly required to certify as to the indigency of such patients, and

WHEREAS, The position of the Mississippi State Medical Association has been to render such care without charge to the patient, and

WHEREAS, Individual physicians feel that under the new law, the possibility may exist that they may be rendering care on a charity basis not of their own choosing, now, therefore, be it

Resolved, That the Mississippi State Medical Association reexamine its position on the treatment of charity patients admitted to hospitals under the State Hospital Commission program in the light of this new enactment.

The resolution was approved by the House of Delegates and referred to the Board of Trustees for study and reporting. Initial discussions on the resolution were conducted by the Board at its August 5-6 meeting at which the decision was made to sponsor a comprehensive study of all programs of care for the indigent in Mississippi.

During the period September 1—November 30, the study was conducted, the data being secured from (1) official state records, both from agencies and the State Department of Audit, (2) personal interviews and conferences with selected agency heads, and (3) applicable statutes and regulatory materials. Included in the study were programs of:

(a) Eleemosynary Institutions (charity hospitals)
(b) Mental Institutions
(c) University Hospital
(d) Vocational Rehabilitation
(e) Crippled Children's Service
(f) Rehabilitation for the Blind
(g) Cerebral Palsy Hospital School
(h) State Board of Health

(i) Department of Public Welfare
(j) State Hospital Commission

The study was received, reviewed, and discussed by the Board at its December 10, 1964 meeting.

Pertinent Statutes. The State Hospital Commission Act is defined as including Sections 7130 through 7146, inclusive, Mississippi Code of 1942, Recompiled, also indexed and codified as Chapter 178, Laws of 1936, as amended. Those portions pertinent to this study are as follows:

Sec. 7138. Admission of Patients. All persons desiring to be received into approved hospitals under this act shall procure before admission a certified recommendation from two resident citizens of good character of the county in which the applicant resides. . . .

Sec. 7144.3. Physicians' Fees. No physician on the staff of any hospital, participating under the provisions of this act, shall knowingly charge, accept, or retain any fee for medical or surgical services rendered in connection with treatment of indigent persons while being cared for under the terms of this act.

Prior to enactment of House Bill 135 during the 1964 Regular Session of the Mississippi Legislature, the section on admissions was as follows:

Sec. 7138. Admission of Patients. All persons desiring to be received into approved hospitals under this act shall procure from a reputable physician and two residents of good character of the county in which the applicant resides a certificate of eligibility before being admitted to such hospitals, provided it is practicable to procure such certificate. . . .

The section on physicians' fees, Sec. 7144, was enacted in 1936 when the program was first established. It was reincorporated into the revisions of 1960 when the act was amended procedurally and technically. From a historical rather than a documented viewpoint, the original enactment related to a large extent to proprietary hospitals owned by physicians where the latters' professional fees for care of the indigent were distinctly secondary to payment for hospital services. Despite the fact that profound and sweeping change has occurred in the hospital and medical service picture in Mississippi since 1936, the state medical association's policy attitude toward this program has remained virtually unchanged. Not until the introduction and adoption of Resolution No. 9 at the 96th Annual Session is there a recorded instance where formal re-examination of this basic policy has been suggested.

State Hospital Commission. The commission, under the provisions of Sec. 7130, is composed of five members appointed to four year terms by the Governor with the advice and consent of the Senate. The Governor serves as chairman. The program is operative in 78 of the 82 counties, those four having charity hospitals being statutorily excluded. Hospitals which have applied for and received a certificate of authorization from the commission and which have adopted a uniform classification of accounts as prescribed are eligible to recover the maximum rate of reimbursement, currently $11.50 per day. The statutory maximum is $12.50 per day, but $1 is withheld and pooled for extensions of care for OAA patients who have exhausted Kerr-Mills eligibility. The 1964-66 SHC appropriation is $1,929,532, an increase of $429,532 or 28.63 per cent over 1962-64.

(a) *Determination of Indigency.* Under authority of Sec. 7132, the commission is empowered to make such reasonable rules and regulations as are necessary to carry out the program, including methods for determination of indigency and for fixing the reimbursement rate. Eligible applicants for care must have resided in the state for six months as bona fide residents preceding admission. They must be unable to provide from their own resources or from the resources of those upon whom they may be legally dependent. In the case of the newborn, residency of the parents obtains in determining eligibility.

(b) *Property and Resource Exclusions.* The following exclusions are made in applying the means test for care eligibility:

(1) Resources of the applicant shall not be deemed to include any property actually used and substantially useful in earning a livelihood or income exempt from garnishment.

(2) No person shall be denied indigent status by reason of the fact that he may have limited funds or rights to insurance benefits which are inadequate for meeting at least 75 per cent of the cost of anticipated hospitalization. In such case, he may be admitted as a pay patient and thereafter transferred to indigent status.

(3) No person shall be expected to dispose of any property or other resource at a sacrifice to meet or allay expense of hospitalization unless ownership of such would be deemed extravagant or wasteful.

(c) *Scope and Extent of Program.* In 1963, the most recent year for which complete opera-

tional data are available (and at the former $10 per day reimbursement rate), the SHC program expended $619,465 for 77,143 days of inpatient care for 7,605 patients. Of this total, $71,386 was expended for 12,672 days of inpatient care in the Baptist and John Gaston Hospitals at Memphis for 906 patients.

Conclusions. The Board of Trustees, through its studies and research of all programs of medical care for the indigent in Mississippi has concluded that:

(a) A physician appears to have a tripartite obligation with respect to care of the indigent under the SHC program. The first is his responsibility to his patient, the paramount obligation of a doctor of medicine. Second, he has a legally inferred if not a statutory obligation under the SHC law and under which acceptance of fees is specifically prohibited. Third, he has a traditional responsibility which has been built since enactment of the law in 1936 where he has wittingly or unwittingly gained the image of the expected gratuitous provider of care for these patients.

(b) The professional prerogatives of the physician are circumscribed under the SHC law. While it is technically correct that only a physician can and should admit a patient to a hospital, the program as constituted places him in a tenuous position by establishing and ordaining eligibility for care, agreement by the hospital to accept the patient, and finally placing the physician in the position (especially if he is on service at the time) of being almost without alternative to ordering the admission, thus committing himself to render the care.

(c) While the law does not literally commit or offer the services of a physician under the program, forces are brought to bear upon him through administrative processes. Moreover, there is no excusal or exemption clause guaranteeing his prerogative of refusal to participate, as the association caused to be incorporated in the administration of the Dependents' Medical Care Act (original Medicare).

(d) Duplication exists among the several state-sponsored programs of care for the indigent: The same patient can legally qualify for care under more than one such program, for example, SHC and OAA portion of Kerr-Mills. There are widely varying legal definitions of indigency, ranging from the stern certification (including that of a physician) requirements of the state charity hospital program to the recently liberalized SHC program. There appears to be a lack of interagency coordination and lateral communications in these connections.

(e) There is both inequality and lack of uniformity in the state-sponsored programs. All four charity hospitals are located on or south of a line extending from Vicksburg to Meridian. Some general medical and surgical hospitals are willing to participate in the SHC program and some are not. As would be expected, there are varying degrees of clinical care capability among participating hospitals. The Mississippi Hospital Association states that about 60 per cent of patients admitted to charity hospitals are residents of the counties in which the institutions are respectively located.

(f) These several programs are emphatically not consistent in requirements upon and consideration of physicians. In some few instances, physicians are compensated for services, whereas others statutorily forbid payment. Some are selective as to which physicians may participate, whereas others are not.

(g) Finally, changes and amendments to the State Hospital Commission Act are not deemed appropriate at this time. Among considerations leading to this conclusion are the following:

(1) The Taylor Resolution seeks only a reexamination of policy position on the program.

(2) The relatively small volume of care, approximately 7,600 patients annually, does not appear to warrent such action at this time.

(3) Until procedural and administrative alterations can be sought and evaluated, the possible reaction of public opinion and state government to revising drastically this program as regards physicians' services should be weighed carefully.

(4) At no time during consideration of the resolution and the study has any proposal been made by any member of the Board or by any general officer that such legislative amendments be sought.

Recommendations. It is recommended that the association, under formal policy, act to achieve the following with reference to the State Hospital Commission program:

(a) Request the commission to amend its regulations to assure every licensed physician in Mississippi that he is free to participate in the program or not, according to his personal inclination and contingent upon his enjoyment of staff privileges in the participating hospital, even to the extent of declining a given case without having to state a reason therefor.

(b) Request the commission to consult the Mississippi State Medical Association in connection with regulatory policy and administrative procedures of the program, recognizing that professional services are gratuitously provided and that participating physicians have a deep and abiding interest in the wellbeing of these patients.

(c) Request the commission to cause the exercise of all reasonable effort to apply the statutory means test realistically to the end that only genuinely indigent patients receive benefits of the program.

(d) Request the Mississippi Hospital Association to encourage member institutions to ascertain if applicants possess voluntary health insurance or prepayment coverage, and where at all possible, admit these patients only on private services.

(e) Request both the commission and hospital association to act together to minimize the transfer of patients from private to indigent status and then only when appropriate welfare department investigation has been conducted and a report furnished to all concerned, including the attending physician.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

In response to a resolution introduced by the Coast Counties Medical Society, the Board of Trustees has conducted extensive and exhaustive studies on care of the indigent in Mississippi. We approve the conclusions and recommendations of the Board as presented in this report and we recommend that the Board continue to study this matter in the light of pending legislation before the Congress.

The report of the reference committee was adopted.

SUPPLEMENTAL REPORT "B" OF THE BOARD OF TRUSTEES

Dr. C. D. Taylor, Jr.: Background. At the 96th Annual Session in 1964, Resolution No. 10, subject: Blue Shield Fees, was introduced in behalf of the Coast Counties Medical Society:

WHEREAS, Fees and payments for medical care allowed by Blue Cross for hospital coverage have gradually increased with concomitant increases in premium costs, and

WHEREAS, Blue Shield fees and payments have not increased materially for professional services rendered by physicians in a number of years, and

WHEREAS, Many procedures of both surgical and medical natures are completely omitted under Blue Shield schedules of benefits, now, therefore, be it

Resolved, That the Mississippi State Medical Association through its 12 directors of Blue Cross-Blue Shield Plan exert an effort to re-evaluate Blue Shield payments in the light of present medical care costs.

The House of Delegates approved the resolution and recommended that "each director (physician-director) be individually notified of this action" and that "the 12 directors inform the Board of Trustees of their evaluations, findings, and actions in this specific connection."

The Board of Trustees reviewed the resolution and action of the House at its August 1964 meeting and voted to make the facilities of the association available to the directors with the suggestion that a meeting be conducted. Dr. Lamar Arrington, vice chairman of the Board of Trustees and a director of Blue Cross-Blue Shield, was asked to serve as chairman for purposes of the meeting and the response required by Resolution No. 10. Prior to this action, each director had been advised in writing of the resolution and expression by the House of Delegates. So that members of the association might have the opportunity of appearing in person before the directors or submitting a written statement, a notice was published in JOURNAL MSMA V:390 (Sept.) 1964, and a letter in this connection was written to each component medical society. The meeting was conducted at Jackson on September 30, 1964, with 11 of the 12 directors present and participating. The group met again on April 7, 1965, with nine of the 12 present.

Actions of the Physician-Directors. At the September 30, 1964, meeting, the physician-directors voted to present the full text of Resolution No. 10 at the regular board meeting of Blue Cross-Blue Shield on October 1, to report that the physician-directors have the impression that there is dissatisfaction with respect to professional fee benefit allowances, and to ask Mr. Richard C. Williams, president of Blue Cross-Blue Shield, to furnish a complete breakdown of funds between Blue Cross and Blue Shield as to amounts collected in premiums and disbursed for each. Mr. Williams rendered two reports in this connection, one on March 19, 1965, and one on April 6, 1965.

Information on Blue Plan Operations. The following is quoted from Mr. Williams' April 6 report:

MISSISSIPPI MEMBERS ONLY
1964

	Blue Cross	*Blue Shield*	*Major Medical Cancer and Other Riders*	*Total*
Income	$9,065,337 (100.00%)	$7,353,116 (100.00%)	$2,014,872 (100.00%)	$18,433,325 (100.00%)
Claims	8,080,836 (89.14%)	6,553,361 (89.12%)	1,790,266 (88.85%)	16,424,463 (89.10%)
Overhead	755,558 (8.33%)	612,739 (8.33%)	167,390 (8.31%)	1,535,687 (8.33%)
Taxes	135,758 (1.50%)	110,096 (1.50%)	30,076 (1.50%)	275,930 (1.50%)
Net operating income	93,185 (1.03%)	76,920 (1.05%)	27,140 (1.34%)	197,245 (1.07%)

Additionally, the directors reported to the Board of Trustees that they have made thorough investigations in this connection. They also urged that all practicing physicians have candid and complete understandings with their patients that fees agreed upon for professional services are solely the obligation of the patient and not of any voluntary prepayment or insurance plan. Whatever benefits accrue to the patient as a result of such contracts owned should be paid to the patient as indemnity and bear no direct relationship to the fee.

RESOLUTION NO. 11, BLUE CROSS-BLUE SHIELD DIVISION

Dr. C. D. Taylor, Jr.: WHEREAS, The Coast Counties Medical Society presented to the Mississippi State Medical Association a resolution to have the Mississippi State Medical Association Blue Cross Directors investigate Blue Cross-Blue Shield Division of payment and attempt to set up a more realistic schedule, and

WHEREAS, These directors have worked diligently to complete such a project, and

WHEREAS, The Mississippi Hospital and Medical Service Corporation has not provided a satisfactory response, and

WHEREAS, Only seven states have plans of Blue Cross and Blue Shield combined, the others having separate plans that are doctor administered, now, therefore, be it

Resolved, That the Mississippi State Medical Association through its Board of Trustees or other duly appointed authority within the next year explore the feasibility of setting up a separate Blue Shield Plan administered by the Mississippi State Medical Association.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee simultaneously considered this report of the Board of Resolution No. 11 presented in behalf of the Coast Counties Medical Society. The report of the Board presents information in response to a resolution introduced at the 96th Annual Session in 1964 and the resolution asked that the Board of Trustees explore the feasibility of setting up a separate Blue Shield plan administered by the Mississippi State Medical Association. Your reference committee recommends that the resolution be referred to the Board of Trustees for study and the seeking of further information. Your committee notes that there is distress and dissatisfaction in connection with the furnishing of information on Blue Shield. We also recommend that the Board consider the possibility of employing actuarial consultation in this connection.

The report of the reference committee was adopted.

SUPPLEMENTAL REPORT "C" OF THE BOARD OF TRUSTEES

Dr. C. D. Taylor, Jr.: Project Background. Early in the 1964-65 association year, the Mississippi Department of Public Safety (Highway Patrol) formally requested the guidance, advice, and assistance of your association to "assist the Driver License Administrator in evaluating the individual (applicant's) physical and mental ability to operate a motor vehicle." It was clearly stated that the DPS earnestly desired to avoid and obviate the necessity of a private physician's having to make such a decision. The request was favorably considered by the Board of Trustees who, after making appropriate studies, appointed an *ad hoc* Committee on Medical Aspects of Driver Limitation consisting of nine members, one for each Highway Patrol district, representing those disciplines most frequently concerned with conditions associated with driver limitation. These include general practice, ophthalmology, otolaryngology, general surgery, orthopaedic surgery, internal medicine, neurology, and psychiatry. The committee has conferred extensively with the Driver License Administrator and his associates in the DPS.

Driver Limitation. Over many years, the Mississippi State Medical Association has expressed its concern over motor vehicle fatalities and injuries in various ways. We have participated in the Cornell University Automotive Crash Injury Research program which is a continuing study of

death and injury-producing phenomena with a view toward building safety into automobiles. In no sense is it a prevention program related to driver capacity and competence. The Board of Trustees, appreciating that between 80 and 90 per cent of motor vehicle accidents are directly attributable to drivers (as authenticated by studies of AMA, the U. S. Public Health Service, and the American Association of Motor Vehicle Administrators), has deemed this opportunity one of great importance in contributing to highway safety. In this connection, it is pointed out:

(a) There are about 91 million licensed drivers in the United States. To give this group medical examinations initially and periodically for purposes of driver licensure would be a waste of medical manpower. There are no scientific data available to indicate that drivers with any particular disease condition have higher accident rates than comparable groups free of such conditions. Conversely, the rate among young male adults, ages 16 through 25, is highest, and this group has the fewest impairments and disease conditions. But limiting factors are recognized as being significant among those to be evaluated in determining if reason for driver limitation exists.

(b) The Board of Trustees concurred in the policy statement of the American Medical Association in this general connection: "The AMA believes that physicians must assume leadership in the development of sound medical criteria for driver licensing. The diagnosis of medical conditions affecting the ability of an individual to operate a motor vehicle is the responsibility solely of the physician. The AMA believes that recognition and appropriate handling of driver limitation will contribute markedly to automobile accident prevention programs."

Mississippi Program. Working within the framework of guides developed, the committee has established criteria under which examination for possible driver limitation is recommended:

(a) When the license applicant displays an obviously impaired physical function.

(b) When a driver has been involved in multiple accidents within a short calendar period.

(c) When a driver must be placed in the assigned risk pool for insurance underwriting purposes because of refusal by various commercial carriers to assume his risk.

(d) When a driver voluntarily suggests that he blacked out or that medical problems contributed to an accident.

The committee, after review and study of other similar programs, particularly those in Florida, North Carolina, and Ohio, devised both a recommended procedure and an examination form. When a determination has been made by the DPS that medical examination of an applicant or licensee should be made in accordance with medically-established criteria and guides, the form is given to the individual under these instructions:

(a) Driver license applicants who must undergo medical examinations are asked to consult their personal physicians who are private practitioners and the applicant is given the clear understanding that a professional fee will be charged for the service.

(b) The examining physician is asked to report only his medical findings. He is neither asked nor required to state or certify whether the applicant is qualified to operate a motor vehicle or not. This determination is made in accordance with law by the Department of Public Safety with advice from the state committee.

Additional and Future Studies. The Board of Trustees has approved plans for further studies by the committee into motion ranges and physical strength as are related to motor vehicle operation, effects on driving of degenerative disease, use of drugs, and tests for intoxication with alcohol.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

This report outlines the work of the recently appointed *ad hoc* Committee on Medical Aspects of Driver Limitation and the driver applicant examination program which your association established at the request of the Mississippi Department of Public Safety. We approve the action of the Board in establishing this committee and commend the splendid work which has been carried out in this program.

The report of the reference committee, after discussion by Dr. James R. Cavett, Jr., of Jackson, Dr. J. T. Davis of Corinth, Dr. S. S. Kety of Picayune, and Dr. Guy T. Vise of Meridian, was adopted.

SUPPLEMENTAL REPORT "D" OF THE BOARD OF TRUSTEES

Dr. John B. Howell, Jr.: The Board of Trustees believes it appropriate to discontinue the degree of membership in our association designated "Scientific Membership." There are sufficient active and exempt categories of membership to accom-

modate all applicants who may be elected by the several component medical societies. Accordingly, the Board of Trustees recommends deletion of Section 3 (d), Chapter I, By-Laws of the association and all references to scientific membership contained in Chapter XII of the By-Laws.

The Board of Trustees recommends that this proposal be referred to each component medical society for consideration and discussion during the 1965-66 association year and presented to this House of Delegates for final action at the 98th Annual Session in 1966.

ACTION OF THE HOUSE OF DELEGATES

Without objection, the report was received at the adjourned meeting of the House of Delegates to lie on the table for one year, until the 98th Annual Session.

SUPPLEMENTAL REPORT "E" OF THE BOARD OF TRUSTEES

Dr. John B. Howell, Jr.: Under the provisions contained in Section 1, Chapter XII, By-Laws of the association, the Board of Trustees acted upon the application of the Clay, Lowndes, Oktibbeha, and Noxubee Counties to establish a separate component medical society and to charter such society under the name of the Prairie Medical Society. Such charter will become effective January 1, 1966, so that the fiscal year will run concurrently with the fiscal year of the other societies.

During the time of this meeting of this House of Delegates and January 1, 1966, the secretary of the present society is requested to reduce the number of those delinquent in the payment of dues among this group of physicians.

ACTION OF THE HOUSE OF DELEGATES

Without objection, the report was acted upon without referral and adopted.

REPORT OF THE SECRETARY-TREASURER

Dr. James L. Royals: Duties and Responsibilities. As an elected general officer of your association, your Secretary-Treasurer is charged with such duties as ordinarily devolve upon the secretary of a corporation by law, custom, and parliamentary usage. Additionally, he is the constitutional designee as chairman of the Council on Scientific Assembly.

Membership. For the second consecutive year, the total membership of your state medical association was the highest on record as of December 31, 1964, the close of our fiscal year. On that date, there were 1,392 members in good standing as compared to 1,365 a year previously. The 1964 total includes:

1,226 paid members
96 Emeritus members
70 members exempt from dues other than Emeritus

On May 3, 1965, there were 1,331 members in good standing on the rolls as compared with 1,282 on May 1, 1964, a satisfactory increase in early membership reporting by the component societies. Among these are:

1,177 paid members
86 Emeritus members
68 members exempt from dues other than Emeritus

In the exempt group, there are 41 excused from dues by reason of training in AMA-approved residency programs, 3 in military service, 8 exempt by reason of extended illness, 7 Associate members, and 6 Scientific members. To maintain our membership records in consonance with AMA, deceased members are removed from the rolls for statistical purposes after the close of the year being reported. As before, deaths are reported in your JOURNAL as soon as possible.

The association commends the following component medical societies for having secured 100 per cent of their renewable 1964 membership for the current year as of May 3:

Amite-Wilkinson County Medical Society
Claiborne County Medical Society
Coast Counties Medical Society
Delta Medical Society
DeSoto County Medical Society
North Mississippi Medical Society
Pearl River County Medical Society

Fiscal Reporting. In accordance with accepted practice, your Secretary-Treasurer submits a statement of your association's fiscal condition as of April 30, 1965, as an attachment to this report. The annual report of audit has been rendered by the independent certified public accountant based upon detailed examination of all books and records for 1964. The Council on Budget and Finance has reviewed fiscal records and the report of audit and has reported to the Board of Trustees in this connection. The council has recommended an overall budget of $720,151.13, the lowest budget since 1958 and a decrease of $7,743.87 from last year. In accordance with our reporting policy, a copy is appended to this report.

Constitutional Duties. Your Secretary-Treasurer is an *ex officio* member of all councils and

committees of your association. In this capacity, he attends and participates in meetings. Activities in connection with the primary responsibility of serving as chairman of your Council on Scientific Assembly are reported separately.

MISSISSIPPI STATE MEDICAL ASSOCIATION

Statement of Financial Condition as of April 30, 1965

ASSETS

Current Assets		
General Fund		
Cash on deposit	$72,832.70	
Due from Department of Defense, Medicare administrative costs	1,178.32	
Due from advertisers, JMSMA	4,093.89	
Other receivables	964.80	
Prepaid expenses	2,247.05	$81,316.76
Medicare		
Cash on deposit, Professional Account	24,898.44	
Due from Department of Defense, Professional Account	30,101.56	55,000.00
Fixed Assets		
Land	13,605.30	
Building and equipment, less depreciation	74,344.85	87,950.15
Total book assets		$224,266.91

LIABILITIES AND WORTH

Current Liabilities		
Amortization, building, current year	$ 2,730.77	$ 2,730.77
Long Term Liabilities		
Building	34,296.81	
Medicare capitalization	55,000.00	89,296.81
Net Worth		
Unappropriated net worth	132,239.33	132,239.33
Total liabilities and net worth		$224,266.91

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

The work of our Secretary-Treasurer, Dr. James L. Royals, is deeply appreciated by every member of the association. He has devoted himself unstintingly to his many tasks and assignments and in his report, he has informed us of the membership, of the solvent fiscal status of our association, and of his constitutional duties. We approve his report and recommend its adoption by the House.

The report of the reference committee was adopted.

REPORT OF THE COUNCIL ON BUDGET AND FINANCE

Report of the Secretary-Treasurer and Association Operations. We have considered the fiscal portion of the Report of the Secretary-Treasurer and we have examined the operation of the association with respect to all fiscal activities, including the report of the independent certified public accountant. The findings are to the satisfaction of your council. Prior to this annual session and during the annual session, we met for these purposes and have conferred with the Board of Trustees. We have determined that all accounts, receipts, and disbursements are regular and authorized.

Association Budget. We have considered the 1965-66 budget for operation of your association. We have conferred with the Board of Trustees who concur in our recommendations. Each item has been carefully evaluated as to necessity and adequacy. We recommend a total budget of $720,151.13 which includes the following sums for purposes stated: (1) For general operation of all activities and departments of the association, including production of your JOURNAL, $88,104.61; (2) for building amortization, utilities, maintenance, taxes, and associated expenditures, $12,340.73; (3) for professional fee aspects of the Medicare program, $600,000. This is a decrease from our 1964-65 budget of more than $7,700. We recommend adoption of this amount as being a realistic minimum for continued effective operation of your association.

Insurance and Safeguards. We have examined a survey of insurance owned by the association on its physical properties and we find it adequate. Suitable safeguards for disbursement procedures, fidelity bonds, and proper safekeeping for records have been provided.

The report of the council, after discussion by Dr. George E. Twente of Jackson, was adopted.

REPORT OF THE EXECUTIVE SECRETARY

Mr. Rowland B. Kennedy: Duties and Responsibilities. Your Executive Secretary is responsible for maintaining the headquarters office, for conducting the administrative affairs of your association, and for various fiduciary duties as required by Article VII of the Constitution and Section 7, Chapter VII, of the By-Laws. Because your Executive Secretary reports in detail to the officers, Board of Trustees, and various supervisory bodies of the association, this report is purposely brief in scope and detail.

Executive Staff. Your executive staff is organized into four service departments which include membership, fiscal and accounting, JOURNAL, and medical care plan services. Supportive services to officers, the Board of Trustees, the eight elected councils, and the 10 constitutional

and nine *ad hoc* committees including records-keeping, research, studies, and administrative tasks. During the association year reported on, there have been changes in staff membership resulting from resignations, but there has been no numerical increase of permanent members.

Expression of the Staff. In behalf of all members of your executive staff, deep appreciation is expressed for the confidence you have reposed in us and for the support given our work in your behalf.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee considered the report of the Executive Secretary which outlines the function of our Central Office Headquarters staff. We associate ourselves with the Executive Secretary in commending the staff and express our appreciation for the service of this loyal group to our association. We also commend the Executive Secretary for his work. Your reference committee recommends the adoption of this report.

The report of the reference committee, as amended by Dr. Eldon L. Bolton of Biloxi to add the third sentence, was adopted.

REPORTS OF THE DELEGATES TO AMA

Dr. J. P. Culpepper, Jr.: 113th Annual Convention. The 1964 annual convention of the American Medical Association was conducted at San Francisco June 21-25, 1964. As your accredited delegate, I submit this summary report. Principal issues before the House of Delegates included tobacco and health, physician-hospital relations, the cost of medical care, maternal and child welfare, and federal subsidy for health insurance and prepayment plans. Official attendance was 49,437 among whom were 14,229 physicians. Dr. Norman A. Welch of Boston, since deceased, was inaugurated president, and Dr. Donovan F. Ward of Dubuque, Iowa, was named president-elect. The 1964 AMA Distinguished Service Award was presented to Dr. Irvine H. Page of the Cleveland Clinic for his investigations in cardiac, vascular, and renal disease.

Tobacco and Health. Responding to 10 resolutions, all seeking condemnation of cigarette smoking, the House acted to define the habit as "a serious health hazard." In a four point policy position, the House stated that "the American Medical Association is (now) on record and does recognize a significant relationship between cigarette smoking and the incidence of lung cancer and certain other diseases." Full appreciation was expressed for the Surgeon General's report, and a stepped up public education campaign, especially among young people, was approved. Finally, the House reaffirmed the AMA-ERF tobacco and health research program, despite some criticism for its having accepted $10 million from five major tobacco companies with which to underwrite the program.

Physician-Hospital Relations. For the first time since approval and publication of the Hess Report in 1951, the House acted to update AMA policy in the delicate area of physician-hospital relations. A substantial study report established guides in this connection, recognizing changing patterns in medical care which include (1) salaried chiefs of staff, (2) salaried (hospital) directors of medical education, (3) salaried physicians employed for service in outpatient and emergency departments, (4) employed house officers who are not in training who do the work of interns and residents, and (5) the growing utilization of closed panel medical care programs by hospitals. The report called attention to "the imperative need for the medical profession to assume responsibility for the quality, continuity, and availability of professional services. . . ."

Other Actions. On the issue of human rights, as set out in various resolutions, the House stated that it called "upon all state medical associations, all component medical societies, and all individual members of the AMA to exert every effort to end every instance in which such equal rights, privileges, and responsibilities are denied." Other significant actions were:

(a) *Maternal and Child Welfare.* Ongoing studies on human reproduction were encouraged, and it was agreed, in another separate action, to broaden studies on the problems of unwed mothers, illegitimacy, and related areas and to develop positive preventive programs where possible. Protection of children against abuse through appropriate "battered child" laws enacted at state level was strongly supported. Your delegates note that our association has supported a similar position for two years and, in fact, sponsored such a law in the 1964 Regular Session of the Legislature.

(b) *Health Insurance.* The House voted to oppose federal subsidy of voluntary health insurance and prepayment plans and asked for an AMA study of the development of state programs which utilize prepayment or insurance principles in the implementation of state programs of medical assistance to the aging under Kerr-Mills. Significantly, this position was apparently abandoned

completely in the subsequent Eldercare proposal.

(c) *Medical Ethics.* A full time Department of Medical Ethics now serves the membership, and the House approved an expanded professional education program in this connection. Additionally, public education as to the meaning and importance of medical ethics will be undertaken. The first national conference in this connection will be sponsored late in 1965.

Dr. George E. Twente. Because of personal illness of an acute, short term nature and surgery, Dr. Twente was unable to attend the San Francisco convention. His alternate, Dr. Stanley A. Hill of Corinth, was seated, and Dr. Twente and I express our appreciation for his service.

Dr. George E. Twente: 18th Clinical Convention. The 1964 clinical convention of the American Medical Association was conducted at Miami Beach, Florida, November 29-December 2, 1964. As your accredited delegate, I submit this summary report. Major issues before the House of Delegates included health care for the aging, a new policy statement on human reproduction, and the final recommendations from the Commission on the Cost of Medical Care. Official attendance was 9,356 among whom were 4,118 physicians. A memorial tribute was paid to the late Dr. Norman A. Welch, our president, who died on September 3, 1964, after having served only 72 days. In a special election conducted in accordance with the By-Laws, Dr. James Z. Appel of Lancaster, Pa., was named president-elect. Dr. Donovan F. Ward of Dubuque, Iowa, assumed the presidency upon Dr. Welch's death.

Health Care for the Aging. The entire text of Dr. Ward's address was devoted to unequivocal opposition to King-Anderson-type legislation, and he declared that "we have no choice except to stand firm in our efforts to prevent the standards of health care in this country from being undermined by a radical departure from the unique American way which has accomplished so much for mankind." He said that we could not compromise our position "with honor and duty" and concluded by stating that "If we have been right in the past, then we are right today . . . and we shall be right tomorrow."

(a) *Resolutions.* Three resolutions which would have altered the AMA position on legislation for health care for the aging were not approved. Included among these was a resolution by the District of Columbia which would have had AMA call upon the federal government to enact a federal program of health care for the aging.

(b) *Education Campaign.* The House approved an expanded public education program to be conducted under the direction of the Board of Trustees. In requesting this authority, the Board said that "a variety of techniques and media must be utilized if the public, the Congress, and special audiences are to be reached effectively."

(c) *Special Conferences.* The several state medical associations were urged to send representatives to two conferences which were announced by the Board on the last day of the convention. One was scheduled for December 13 and the other for January 9-10, both at Chicago, for the purpose of considering further implementation and expansion of Kerr-Mills.

Human Reproduction. A four point program was adopted, updating policy positions on population control to conform with changes in society and medicine:

(a) Problems relating to human reproduction, including the need for population control, are more than matters of responsible parenthood; they are matters of responsible medical practice.

(b) The medical profession should accept a major responsibility in matters related to human reproduction as they affect the total population and the individual family.

(c) In discharging this responsibility, physicians must be prepared to provide counsel and guidance when the needs of their patients require it or refer the patients to appropriate persons.

(d) The AMA shall take the responsibility for disseminating information to physicians on all phases of human reproduction, including sexual behavior, by whatever means are appropriate.

Other Actions. A total of 33 recommendations by the Commission on the Cost of Medical Care were approved with primary emphasis upon continuing studies in medical socioeconomics. A program of cooperation with the U. S. Public Health Service to eradicate the *Aedes aegypti* mosquito from the hemisphere was agreed to, and approval and support of the National Council for Accreditation of Nursing Homes was reaffirmed. The AMA-ERF reported that one out of every six medical students, interns, and residents—an estimated 40,000 individuals—is now receiving financial assistance from the Foundation's loan program. These funds are guaranteed on a basis of $12.50 credit for every $1 of AMA-ERF funds, and all are from private, nongovernmental sources.

SUPPLEMENTAL REPORT "A" OF THE DELEGATES TO AMA

Dr. J. P. Culpepper, Jr., and Dr. George E. Twente: Special Convention. The AMA House of Delegates was called to meet in special session at Chicago February 6-7, 1965, the fifth such meeting in 118 years. The Board of Trustees approved the call "to consider pertinent items relating to current national health legislation . . . and adequate support for the educational, scientific, and other programs of AMA." On January 20, the state association's Council on Legislation met in this connection, and our Board of Trustees met on January 21. Your delegates were present at the Board meeting and had the benefit of a review of association policy in preparing for the special session.

Policy Actions. The House of Delegates considered six resolutions and reports from the Board of Trustees, the Council on Legislative Activities, and the Council on Medical Service. Unanimous approval was given the AMA Eldercare proposal, introduced in the Congress as the Herlong-Curtis bill, H. R. 3727. Additionally, the House also:

(a) Reaffirmed its opposition to the King-Anderson bill and all similar measures,

(b) Commended the Board of Trustees and its Task Force for organizing, implementing, and funding a program of public education on the Eldercare proposal,

(c) Called for study of the "desirability and feasibility of extending the principle of federal and state assistance under Kerr-Mills to persons below the age of 65 who need help,"

(d) Adopted a statement on Standards for Health Care Programs, and

(e) Urged that services of pathologists, radiologists, physiatrists, and anesthesiologists be excluded from the provisions of any legislative proposal which excludes services of other physicians.

Deliberations. A seventh resolution, introduced after the time for receiving resolutions, would have included federally-established income limits and medical service minimums in the Eldercare proposal. It was dropped when unanimous consent was denied, and your delegates offered the objection. The Eldercare proposal was remarkably similar to a recommendation which was defeated at the Miami Beach Clinical Convention. Virtually all recommendations of the special session, except Eldercare *per se,* were subsequently incorporated into the Mills bill, H. R. 6675, the revised and extensively liberalized King-Anderson bill. Neither an increase in dues nor a special assessment was proposed to finance the campaign which cost approximately $500,000.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee feels that the representation of the Mississippi State Medical Association at the AMA has been outstanding through the efforts of Drs. Culpepper and Twente. We approve the reports of these delegates and commend them for their service.

The report of the reference committee was adopted.

ANNOUNCEMENT OF THE NOMINATING COMMITTEE

Following a recess for caucuses by association districts, the Nominating Committee was announced:

John G. Archer, Greenville, District 1
Joseph B. Rogers, Oxford, District 2
S. Jay McDuffie, Nettleton, District 3
Samuel B. Caruthers, Grenada, District 4
George E. Twente, Jackson, District 5
H. Lowry Rush, Sr., Meridian, District 6
W. W. Walley, Waynesboro, District 7
A. V. Beacham, Magnolia, District 8
C. D. Taylor, Jr., Pass Christian, District 9

Dr. Taylor was elected chairman by the committee which conducted open sessions on May 12, 1965.

REPORT OF THE COUNCIL ON SCIENTIFIC ASSEMBLY

Dr. James L. Royals: Organization and Duties. Your Council on Scientific Assembly is selected pursuant to Section 3, Chapter IX, By-Laws of the association, and is charged with planning the annual session to include all phases of scientific activities. The council membership consists of the chairmen of the seven sections and your Secretary-Treasurer. The President and President-elect are *ex officio* members.

97th Annual Session. At the 1964 annual session, the House of Delegates acted to alter the format of the Scientific Assembly, changing to the presenting of essays before general sessions. The action, however, required that "we retain our seven formal scientific sections, their separate identities, and their prerogatives of selecting their own officers and essayists." Accordingly, no changes in the By-Laws were thereby made necessary. Planning for your present annual session was initiated under this new policy on July 16, 1964, with the first meeting of your council. Eight

general sessions are being presented with only one instance of simultaneous scheduling to accommodate the wishes of those in ophthalmology and otolaryngology. Formal planning was concluded on September 3, 1964, and final organization of the assembly was accomplished by February of 1965.

Symposium on Parapsychology. The special program feature, initiated in 1962, has proved highly popular with members. Additionally, it has also served as a vehicle for opening the Scientific Assembly to other professions and civic leadership. We have been most fortunate in securing academicians and scientists of national and international repute, and the tradition is carried forward this year. Drs. J. B. Rhine and Louisa E. Rhine of Duke University have intrigued the scientific community throughout the world with their work in parapsychology, and their symposium will be a highlight of our annual session.

Exhibits and Award. Each member is encouraged to visit each of the technical and scientific exhibits. Without the support of the technical exhibitors, a registration fee of as much as $25 would have to be charged. On May 13, the Third Annual Mississippi State Medical Association Scientific Achievement Award will be presented to the member or members whose scientific exhibit is adjudged best. It is the hope of your council that the present annual session is professionally profitable and personally enjoyable for all in attendance.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your reference committee particularly commends the Council on Scientific Assembly for organizing the splendid program for our 97th Annual Session. In approving this report, we extend a special commendation to the Council for the splendid Symposium on Parapsychology which was presented.

The report of the reference committee was adopted.

REPORT OF THE COUNCIL ON MEDICAL SERVICE

Dr. Guy T. Vise: Council Organization and Duties. The Council on Medical Service is responsible for the study of all aspects of medical care and the circumstances under which it is provided. It is a constitutional body of the House of Delegates, elected under the provisions of Section 2, Chapter IX, By-Laws of the association. The Council is assisted in its work by seven constitutional committees and three *ad hoc* committees.

(a) *Constitutional Committees.* Cancer Control, Occupational Health, Federal Medical Services, Maternal and Child Care, Mental Health, Diseases of the Heart, and Aging.

(b) *Ad Hoc Committees.* Blood and Blood Banking, Disaster Medical Care, and Teaching Programs in Charity Hospitals.

Committee Activities. Programs, studies, and activities of your council's several committees embrace a wide range of subject areas and policy development. These are:

(a) *Committee on Cancer Control.* The committee has reported on the separation of the American Cancer Society's and Mississippi State Board of Health's service program for indigent cancer patients. The Mississippi State Board of Health now has direct responsibility for the clinic-hospitalization portion of the cancer program.

(1) *American College of Surgeons.* Mississippi now has 11 college-approved tumor clinics. The American College of Surgeon's Committee on Cancer reports appointment of a Fellow in each state to act as counselor and advisor to ACS-approved tumor clinics. Our representative is Dr. M. Beckett Howorth of Oxford.

(2) *Tobacco and Health.* The committee continues to monitor the American Medical Association Education and Research Foundation's study project on tobacco and health. Last year, the Foundation approved 10 applications for research funds amounting to more than $340,000.

(b) *Committee on Occupational Health.* The committee has initiated the study of occupational health services in small plants in Mississippi reported to this House of Delegates last year. The Mississippi Manufacturers Association has assisted the committee in this study by encouraging cooperation from its members. Data on plants in Mississippi were obtained from the business economics and research department of Mississippi State University. The committee has mailed questionnaires to over 300 plants in our state. The information obtained from this mailing will be processed on our Central Office IBM for reporting to the association and other interested groups.

(c) *Committee on Diseases of the Heart.* The committee reports plans for a study on the use of telephone telemetry in the diagnosis and treatment of cardiovascular disease. Members of the committee are participating in planning for a state conference on heart disease to be held next year.

(d) *Committee on Aging.* Members of the committee assisted in formulating a classification system of nursing homes in Mississippi which was

adopted in regulations of the Mississippi State Board of Health effective January 1, 1965. Physicians and their patients can now obtain data on the type of nursing care provided in homes for the aging in our state.

(1) *National Legislation.* The committee expressed its special concern over the effect that recent and proposed legislation in the National Congress will have on medical care for the aging in Mississippi. In this connection, the committee recommended that the council sponsor a state conference on aging at the close of the first session of the 89th Congress to review and discuss with interested groups the future pattern of medical care for the aging in our state. Your council proposes that it sponsor this conference.

(e) *Committee on Mental Health.* Members of the committee continue to participate in the interorganizational Mississippi Mental Health Planning Council whose activities were reported to the House last year. This project will be concluded next year and the committee plans to make recommendations to the council at that time.

(1) *Special Health Insurance Study.* The committee recently conducted a special study to determine the extent of voluntary health insurance coverage of mental illness and disease. The committee reports that commercial insurance coverage of mental illness and disease has these characteristics of limitation: (1) Benefits are low, especially in comparison to surgical benefits, (2) the period of care provided is of limited duration, and (3) the frequency with which the benefits may be enjoyed is restricted.

The committee lists these factors as relevant in limiting insurance coverage of mental illness and disease: (1) chronicity and care patterns which differ from those employed in care of acute, short-term medical and surgical conditions, (2) the lag in scientific advances in developing means and technics for care of mental illness—as compared to other conditions, (3) the scarcity of adequate inpatient facilities for this purpose, (4) the shortage of qualified psychiatric and allied professional personnel, and (5) actuarial uncertainty arising out of these factors.

(f) *Committee on Maternal and Child Care.* Since inception of the continuing maternal mortality study in 1958, the committee has made 425 inquiries on maternal deaths. Replies have been received in 367 or 86.3 per cent of these cases.

(1) *Five Year Report 1957-1961.* The first five year report of the committee's studies was published in the December, 1964, issue of the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION. The leading causes of maternal deaths in Mississippi are hemorrhage, toxemia, and infection. The total number of deaths from hemorrhage has shown a sharp decline from 29 in 1957 to 10 in 1961. However, little change is noted in the number of deaths from toxemia and infection during this period.

(2) *Program on Maternal Death Studies.* The committee reports organization of a program on maternal death studies for presentation to interested component societies of the association. This program has been presented to the Delta Medical Society and your council understands it was very well received.

(g) *Committee on Blood and Blood Banking (ad hoc).* The committee has updated its 1961 study of blood banking services in Mississippi. Your council believes it significant that 62 per cent of the hospitals responding to this study report blood banking services which qualify under criteria established by the American Association of Blood Banks.

(1) *Workshop-Institute.* The committee reports plans for a second workshop-institute on blood banking and transfusion services. The meeting will be conducted at Jackson on August 12, 1965.

(h) *Other Committee Activities.* The council's Committee on Federal Medical Services continues to monitor the VA hospital and medical programs and will report extensively in this regard every four years. The Committee on Disaster Medical Care *(ad hoc)* continues to work with the AMA Committee on Disaster Medical Care and the chairman of this committee has attended national and regional meetings in this connection. The Committee on Teaching Programs in Charity Hospitals *(ad hoc)* has met with officials of the Tulane and LSU Medical Schools and its work is contained in a supplementary report of the council.

Officers of the Council. During the 1964-65 association year, the following served as officers of the council: Guy T. Vise, Meridian, Chairman, and M. Q. Ewing, Amory, Vice Chairman. Other members of the council are: George F. Archer, Greenville; Joseph B. Rogers, Oxford; Edward Pennington, Ackerman; Temple Ainsworth, Jackson; T. E. Ross, Hattiesburg; R. J. Field, Jr., Centreville; and James T. Thompson, Moss Point.

REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

Your reference committee commends the Council on Medical Service for the extensive work carried out by this elected body of this House of Delegates. The annual report of the Council out-

lines the work of its several committees and their respective activities. We approve the report and recommend its adoption.

The report of the reference committee was adopted.

SUPPLEMENTAL REPORT "A" OF THE COUNCIL ON MEDICAL SERVICE

Dr. Guy T. Vise: Purview of Policy Study. The Council on Medical Service, in the discharge of its responsibilities for studying all aspects of medical care, for acting as a fact-finding body in this connection for the association, and for advancing recommendations for policy, has carefully analyzed the program of care contemplated in H. R. 6675, Social Security Amendments of 1965, passed by the House of Representatives on April 8, 1965. The council believes it unrealistic, regardless of legislative views, to ignore the impact upon medical service which this pending legislation will exert when enacted. Under existing policy, we are committed to support of the Kerr-Mills program which H. R. 6675 substantially enlarges. The measure also establishes a basic hospital program and a voluntary supplementary insurance program for persons over 65 both of which will involve physicians with or without a formal expression from this association. In these connections, it is emphasized:

(a) The measure, as now pending, will involve more than 315,000 Mississippians, one out of every seven citizens of our state.

(b) Under all titles of the proposal, in- and outpatient care for the aging, Kerr-Mills, and medical vendor programs in the remaining three care categories, physicians will be paid for their services.

Policy Position. The Council on Medical Service believes that the association has the obligation and duty of fulfilling a new and important role of leadership in the light of this pending legislation. This role includes:

(a) Active representation of the practicing physician's interests as he continues to care for his patients, with the recognition that the circumstances under which these professional services are provided are matters of deep concern to the association.

(b) Prevention of voids and vacuums in operational policy where such would place the physician in a posture of disadvantage in securing prompt and adequate compensation for his professional services, to include provision for periodic review of compensation levels and appropriate adjustments as are economically indicated in the Consumer Price Index and other reliable indices.

(c) Securing and maintaining a high degree of initiative in the development and implementation of new programs of care financing so as to assure an optimum practice climate for those physicians who wish to participate and unqualified impunity for those who do not, even to the refusal of a single case without having to state a reason therefor.

(d) Providing the skills, services, experience, and capabilities of the association in advisory and administrative roles.

(e) Continued pursuit of legislative goals desired by the association in these connections.

Policy Recommendations. If the association sees fit to recognize these realities and to accept these opportunities and responsibilities of leadership, your council recommends that the House of Delegates authorize and direct the association to:

(a) Qualify as fiscal agent and representative for the voluntary insurance program for physicians' services under H. R. 6675 at the appropriate time.

(b) Make full use of its accumulated experience of nine years in the administration of the Dependents' Medical Care Program under which tens of thousands of physicians' claims for professional services have been processed in behalf of participating clinicians.

(c) Seek a means for erecting and maintaining a medical control mechanism comprised of physicians who, as in the Dependents' Medical Care Program, possess authority and the responsibility to act in behalf of their colleagues who have chosen to participate in the voluntary insurance program.

Policy Exceptions. Since the medical care aspects of the program contemplated in H. R. 6675 are not contingent upon need for assistance, except for those titles amending various medical vendor programs in stated categories, it is further recommended that the association consider that no bar shall exist to prevent or alter the usual practice of physicians submitting statements for their usual fees for professional services rendered. This policy shall not be deemed to apply to the programs of care under the State Hospital Commission and the charity hospital system as presently constituted.

REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

In this report, the Council on Medical Service proposes that the association accept a role of active representation of the practicing physician's interest as he continues to care for his patients with the recognition that the circumstances under which these professional services are provided are matters of deep concern to the association. Policy recommendations include a proposal that this House of Delegates authorize and direct the association to qualify as fiscal agent and representative for the voluntary insurance program for physicians' services under H. R. 6675 at the appropriate time. Your reference committee approves the report and recommends its adoption.

The report of the reference committee was discussed by Dr. George E. Twente of Jackson who made a motion to table the report, seconded by Dr. S. H. McDonnieal, Jr., of Jackson, and the motion to table was adopted.

In subsequent discussion, Dr. M. Q. Ewing of Amory made a motion to refer Supplemental Report "A" of the Council on Medical Service to the Board of Trustees for study, seconded by Dr. Frank M. Davis of Corinth. The Speaker ruled the motion out of order, and Dr. Lawrence W. Long of Jackson, on a point of order, called the attention of the House to the fact that the report was on the table. Dr. Guy T. Vise of Meridian made a motion to take the report from the table, seconded by Dr. Ewing. When put by the Speaker, the motion to take from the table was lost.

SUPPLEMENTAL REPORT "B" OF THE COUNCIL ON MEDICAL SERVICE

Dr. Guy T. Vise: Background. At the 96th Annual Session in 1964, the House of Delegates received two reports relating to teaching programs in charity hospitals in Mississippi. These reports resulted from the original proposal in this connection by the Council on Medical Service in 1962. Both reports were adopted. Additionally, the House approved a recommendation from the council that teaching programs be established in the charity hospitals and directed the council to study such programs in nearby teaching centers.

(a) *Report on Teaching Resources and Patient Loads.* The council reported on its survey of physicians who are willing to assist in training programs. This study showed that there are physicians in the communities where the charity hospitals are located who are qualified and willing to teach and supervise in training programs. Additionally, the council studied and reported on bed capacities and the extent of patient loads in each of the four charity hospitals from the viewpoint of teaching opportunity.

(b) *Recommendation to Establish Training Programs.* This House of Delegates approved the following policy in regard to the proposal to establish teaching programs in the charity hospitals:

"We recommend implementation of the proposed teaching programs (in the charity hospitals). We feel that the program will benefit the state, increase teaching opportunities, and upgrade the quality of care in the charity hospitals. We urge the support of the University of Mississippi School of Medicine in this connection."

The House then suggested that the council begin exploratory discussions with nearby teaching centers having an interest and experience in the proposed program.

Tulane and LSU Affiliated Hospital Programs. Your council has met with officials of both the Tulane and LSU Schools of Medicine and discussed their respective training programs in Louisiana's charity hospitals. Extensive data were obtained in these meetings and your council wishes to take this opportunity to express appreciation to Dean Charles C. Sprague of Tulane and Associate Dean Norman S. Gilbert of LSU for their valuable assistance and cooperation.

Your council believes that the following observations concerning the Tulane and LSU teaching programs are highly pertinent:

(a) Both institutions believe their teaching programs have dramatically improved patient care in Louisiana's charity hospitals.

(b) Both institutions are enthusiastic about the teaching value of their charity hospital training programs and generally satisfied with their operation.

(c) Both institutions report that their interns and residents are satisfied with the training programs because while they are at the charity hospitals (1) they have more responsibility for patient care, (2) they are more aware of all patients on their service because of the relatively smaller patient loads, and (3) they receive approximately triple their normal stipend.

(d) Finally, both institutions feel that their charity hospital training programs have led to better professional and public relations.

Recommendation of the Council. Your council proposes to continue its studies on the proposal to establish teaching programs in the four Mississippi charity hospitals. Additionally, your council believes that the data it has obtained in studies directed by this House have laid the necessary

groundwork for the council to begin formally meeting with public and private groups concerned with the operation of the proposed teaching programs. An expression from the House of Delegates in this connection is requested.

REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

The council reports further studies with respect to teaching programs in charity hospitals and conversations conducted with officials of the Tulane University and Louisiana State University Schools of Medicine. The council recommends that it be authorized to continue its studies and to begin meeting formally with public and private groups concerned with the operation of the proposed teaching programs. Your reference committee approves this report and recommends its adoption.

The report of the reference committee was adopted.

REPORT OF THE COMMITTEE ON AMERICAN MEDICAL ASSOCIATION EDUCATION AND RESEARCH FOUNDATION

Organization and Duties. Your Committee on AMA-ERF is composed of one member from each component medical society appointed annually by the president of our association. The committee works in conjunction with the American Medical Association-Education and Research Foundation and solicits voluntary contributions from Mississippi physicians for medical education and research. All contributions are tax deductible and every dollar received is put to work in a medical school of the donor's choice.

1964 Contributions. Your committee is happy to report that Mississippi physicians contributed $8,597.20 to AMA-ERF during 1964, an increase of over $1,300 from 1963 contributions. Nationally, contributions in 1964 totaled $1,313,-559.31. Our University of Mississippi School of Medicine's AMA-ERF allocation for 1964 was $11,483.28. Over 60 per cent of this amount represented contributions from Mississippi physicians, the remainder was the University's share of undesignated contributions.

Medical Education Loan Guarantee Program. The AMA-ERF Loan Guarantee Program experienced its second successive year of increased loan activity in 1964. Number of loans made totaled 7,415, an increase of 13 per cent from the 6,553 granted in 1963. Number of loans to Mississippi medical students, interns, and residents totaled 145 compared to 125 in 1963. These 145 loans had a principal value of $157,900.

1965 Program. Your committee earnestly solicits a contribution to AMA-ERF from every Mississippi physician in 1965. We note the policy of a number of our component medical societies to devote a portion of one meeting each year to an appeal for AMA-ERF contributions. Your committee commends this policy to all component societies.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your committee was glad to receive the information that voluntary contributions to the AMA-ERF are being received from Mississippi physicians and that our gift to the University of Mississippi School of Medicine in 1965 was greater than any previous one. Your reference committee encourages members to support this meritorious program, especially as regards the Student Loan Fund. We approve the report and recommend its adoption.

The report of the reference committee was adopted.

RESOLUTION NO. 1, IN MEMORIAM

Dr. James L. Royals: WHEREAS, There are absent from among our numbers 18 members who have been called by Divine Providence since the 96th Annual Session; and

WHEREAS, Although we are grieved upon the passing of these beloved colleagues and friends, we are inspired by their lives of services and professional attainment; and

WHEREAS, This expression of our grief, deep affection, and respect should be recorded permanently among official records of the Mississippi State Medical Association, now, therefore, be it

Resolved, That this House of Delegates does mourn the passing of the following esteemed colleagues:

Donald R. Alverson, Biloxi, March 29, 1965
Melbourne L. Batson, Jackson, June 21, 1964
Caleb W. Bonney, Satartia, December 28, 1964
Herbert L. Butters, Canton, June 17, 1964
Isaac S. Coe, Lambert, July 7, 1964
William D. Copeland, Sandersville, February 26, 1965
Harvey F. Garrison, Jackson, June 3, 1964
Charles R. Gillespie, Laurel, July 2, 1964
Bobby J. Houston, Jackson, August 2, 1964
Robert P. Hudson, Utica, August 9, 1964

S. Paul Klotz, McComb, January 22, 1965
James N. Mason, Purvis, July 1, 1964
James C. McGehee, Bude, August 17, 1964
Aurelio P. Messina, Vicksburg, August 23, 1964
John R. Snavely, Jackson, June 12, 1964
Joseph S. Talley, Greenwood, December 13, 1964
William H. Watson, Brandon, March 26, 1965
Wesley J. Wiemers, Sanatorium, February 6, 1965

ACTION OF THE HOUSE OF DELEGATES

Without objection, Resolution No. 1 was acted upon without referral and was unanimously adopted by the House of Delegates standing in silent tribute.

RESOLUTION NO. 2, INDIVIDUAL BALLOTS ON PROPOSED AMA POLICIES

Dr. James R. Cavett, Jr.: WHEREAS, Certain basic and far-reaching policy matters proposed for adoption by the American Medical Association could advantageously first be approved by the entire membership, and

WHEREAS, Such consideration does not suggest removing the legislative role from the AMA House of Delegates but rather allowing members of the House to be certain that they are reflecting the attitudes of all members, now, therefore, be it

Resolved, That the Mississippi State Medical Association's delegates to the American Medical Association call for the establishment of a committee at national level to study the feasibility of providing a voting system to allow individual members of AMA to cast a ballot on all decisions of importance concerning common interest and official policy.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

This resolution, introduced by Dr. James R. Cavett, Jr., delegate from Hinds County, asks that the association's delegates to AMA call for the establishment of a committee at national level to study the feasibility of providing a voting system to allow individual members of AMA to cast ballots on all decisions of importance. Your committee was especially grateful for much constructive discussion in this connection and we appreciate Dr. Cavett's having presented this resolution and so accorded us this opportunity. We nevertheless feel that our representations have been entirely sufficient, that our delegates are aware of the wishes of the association and such a voting system might conceivably become a device of a minority which would not represent our wishes. Accordingly your reference committee recommends that the resolution be not adopted.

The report of the reference committee was adopted.

RESOLUTION NO. 3, REVISED HISTORY OF THE ASSOCIATION

Dr. Stanley A. Hill: WHEREAS, The time is ripe for a revised history of the Mississippi State Medical Association, and

WHEREAS, Sixteen years have elapsed since the second edition of the History of the Mississippi State Medical Association was published (in 1949), and

WHEREAS, There are biographies of officers on file not published; there is a wealth of material of recent years that would bring the story up to date; there is probably and potentially more pertinent documented data of the earlier days of the organization that may be found by diligent research, and

WHEREAS, The grade of history desired by the membership is one that would require considerable expense as to time and funds, now, therefore, be it

Resolved, That the Board of Trustees be respectfully requested to set up the plan that will yield a quality history of MSMA in the near future.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

This resolution introduced by Dr. Stanley A. Hill, Past President of the association, requests that consideration be given to the production of a revised history of your state medical association. Your reference committee appreciated hearing favorable discussion in this connection and recommends that the resolving clause be amended to read as follows:

"*Resolved,* That the Board of Trustees be respectfully requested to set up a plan that will yield a quality history of MSMA."

Your committee recommends that the Board consider appointment of a Committee on the History of Mississippi Medicine and recommends that the resolution be referred to the Board of Trustees.

The report of the reference committee, as amended by Dr. Eldon L. Bolton of Biloxi to delete the words "in the future" from the revised resolving clause and by Dr. James G. Thompson of Jackson and Dr. S. S. Kety of Picayune to cause the word "Mississippi" to be inserted in the title of the proposed committee, was adopted.

RESOLUTION NO. 4, IMMUNIZATION AGAINST MEASLES

Dr. Guy T. Vise: WHEREAS, Several component medical societies of the Mississippi State Medical Association conducted highly successful immunization campaigns against poliomyelitis using the Sabin oral vaccine, and

WHEREAS, A residue of contributions remains in some treasuries after defraying costs of the campaigns, which residue funds are generally considered to represent a commitment on the part of the societies to further public service, and

WHEREAS, It is both feasible and practical to conduct similar medically sponsored immunization campaigns against measles with proven, efficacious, immediately available vaccine, now, therefore, be it

Resolved, That this association does encourage component medical societies to extend medically-sponsored, nongovernmental immunization services by utilizing such funds in immunization campaigns against measles.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

This resolution urges the association to support sponsorship of nongovernmental immunization services in campaigns against measles, similar to that conducted against poliomyelitis using the Sabin Oral Vaccine. Your reference committee desires to offer a substitute resolving clause:

"*Resolved,* That this association does urge component medical societies to extend medically-sponsored nongovernmental immunization service campaigns against measles."

Additionally, your reference committee recommends that appropriate articles be published in our JOURNAL MSMA in this connection. As amended, your reference committee recommends the adoption of this resolution.

The report of the reference committee was adopted.

RESOLUTION NO. 5, CERTIFYING BOARD FOR GENERAL PRACTICE

Dr. Frank C. Massengill: WHEREAS, General practice constitutes the largest single sphere of professional interest among American physicians, and

WHEREAS, Physicians in general or family practice have engaged in a continuing endeavor to increase their fund of scientific knowledge, to extend and upgrade professional attainment through serious and formal postgraduate study, and to identify this sphere of professional interest in a manner similar to and consistent with the identification of other distinctive spheres of professional interest among physicians, and

WHEREAS, A decision has been reached to seek the establishment, organization, and approval of a certifying mechanism for those in general practice able to qualify and meet criteria prescribed, now, therefore, be it

Resolved, That the Mississippi State Medical Association does recognize the goals and aspirations sought by those in general practice and does express its approval of the identification of physicians having fulfilled such formal requirements as diplomates of an appropriate American board.

REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

This resolution, introduced by Dr. Frank C. Massengill, points out that a decision has been made to seek the establishment, organization, and approval of a certifying mechanism for those in general practice who are able to qualify and meet criteria prescribed. Moreover, it is understood that there will be no grandfather clause and that all physicians seeking this certification must fulfill qualifying criteria and also meet continuing postgraduate minimums. The resolution asks that the association recognize the goals and aspirations sought by those in general practice and express its approval of the identification of physicians having fulfilled such formal requirements as diplomates of the appropriate American board. Your committee approves this resolution and recommends its adoption.

The report of the reference committee was adopted.

RESOLUTION NO. 6, BLOOD AND BLOOD BANKING SERVICES

Dr. Leo J. Scanlon, Jr.: WHEREAS, Blood and blood banking services are essential in the practice of medicine, and

WHEREAS, Such services in no way constitute a sale or purveyal of products or commodities, now, therefore, be it

Resolved, That the Mississippi State Medical Association holds that the procurement, processing, storage, distribution, and/or use of whole blood, plasma, blood products, and blood derivatives for the purpose of injecting or transfusing the same or any of them into the human body for all purposes whatsoever is the rendering of a service

by every person participating therein whether or not any remuneration is paid therefor and further holds that such does not constitute a sale, and be it further

Resolved, That the association seek an appropriate state legislative enactment in this connection.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICES AND BOARD OF TRUSTEES

This resolution proposes that the Mississippi State Medical Association adopt a policy that the procurement, processing, storage, distribution and/or use of whole blood, plasma, blood products, and blood derivatives for the purpose of injecting or transfusing the same or any of them into the human body for all purposes whatsoever is the rendering of a service by every person participating therein whether or not any remuneration is paid therefor and further holds that such does not constitute a sale. The resolution also asks that the association seek an appropriate state legislative enactment in this connection.

Your reference committee had the benefit of much favorable discussion in support of the resolution and recommends its adoption.

The report of the reference committee was adopted.

RESOLUTION NO. 7, PRACTICE OF PATHOLOGY

Dr. Leo J. Scanlon, Jr.: WHEREAS, The practice of pathology constitutes the practice of medicine as variously defined in case law, scientifically, and ethically, and

WHEREAS, The American Medical Association, first through the Hess Report in 1951 and more recently in the Report on Physician-Hospital Relations in 1964, clearly affirms the professional and ethical definition of this discipline as the practice of medicine, and

WHEREAS, A massive effort has been exerted by the American Hospital Association to define the practice of pathology as a hospital service with specific reference to pending legislation before the Congress, now, therefore, be it

Resolved, That the Mississippi State Medical Association does reaffirm that the practice of pathology is the practice of medicine in all relevant senses and does reject any definition that would seek to portray the practice of any medical discipline as a hospital service and further applies this statement of policy to pertinent legislation pending before the Congress.

RESOLUTION NO. 9, PRACTICE OF RADIOLOGY

Dr. C. R. Jenkins: WHEREAS, The practice of radiology constitutes the practice of medicine as variously defined scientifically, ethically and in case of law, and

WHEREAS, Formal pronouncements of the American College of Radiology and American Medical Association clearly affirm the professional and ethical definition of this discipline as the practice of medicine, and

WHEREAS, The American Hospital Association has undertaken to define the practice of radiology as a hospital service with respect to legislation pending before the Congress, now, therefore, be it

Resolved, That the Mississippi State Medical Association does reaffirm that the practice of radiology is the practice of medicine in all relevant senses and does reject any definition that would seek to portray the practice of any medical discipline as a hospital service.

REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

Each of these resolutions points out that a massive effort has been exerted by the American Hospital Association to define the practice of pathology and radiology as hospital services with specific reference to pending legislation before the Congress and asks that the association reaffirm that the practice of pathology and radiology are the practice of medicine in all relevant senses and rejects any definition that would seek to portray the practice of any medical discipline as a hospital service and further applies this statement of policy to pertinent legislation pending before the Congress. Your reference committee approves these resolutions and recommends that they be adopted.

The report of the reference committee was adopted.

RESOLUTION NO. 8, LAY LABORATORIES

Dr. Leo J. Scanlon, Jr.: WHEREAS, Establishments purporting to offer diagnostic laboratory services and which are not under the supervision of a qualified physician are being operated in Mississippi and even more extensively in other states, and

WHEREAS, The practice of laboratory medicine is legally and ethically the practice of medicine, and

WHEREAS, Such nonmedical establishments represent a potential danger in patient care and a possible source of liability to those who may employ such services, now, therefore, be it

Resolved, That the Mississippi State Medical Association encourages physicians to recognize and appreciate the latent hazards in employing lay laboratory service and further asks the Mississippi State Board of Health to take appropriate cognizance of these sources of growing concern.

REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

This resolution was introduced by Dr. Leo Scanlon and points out that establishments purporting to offer diagnostic laboratory services and which are not under the supervision of a qualified physician represent a potential danger in patient care and a possible source of liability to those who may employ such services. Your reference committee desires to offer a substitute revolving clause to this resolution:

"*Resolved,* That the Mississippi State Medical Association encourages physicians to recognize and appreciate the latent hazard in employing lay laboratory service and suggests that further studies be made with a view toward control of lay laboratories."

Your reference committee recommends adoption of the resolution as changed.

The report of the reference committee was adopted.

RESOLUTION NO. 10, NON-PARTICIPATION

Dr. R. J. Moorhead: WHEREAS, The practice of private medicine has provided residents of the United States with the highest quality medical care obtainable anywhere, and

WHEREAS, The Mills bill, H. R. 6675, proposes a government program of socialized hospitalization and medical care for the aged, and

WHEREAS, Such a program would destroy the patient-physician relationship so essential to the best medical care, and

WHEREAS, Such a socialized program by regimenting physicians and their patients will lead to inferior medical care as it has in other countries, and

WHEREAS, It is the ethical and moral obligation of physicians to take whatever action is necessary to protect ththeir patients from inferior medical care, and

WHEREAS, Non-participation is the one remaining means by which physicians can protect their patients from the deterioration of medical care resulting from socialized medical care schemes, and

WHEREAS, Voluntary non-participation by individual physicians in any scheme deemed by them to be detrimental to their patients' welfare is legal, morally right, and ethical, and

WHEREAS, Non-participation means that physicians will continue to serve their patients as before but will refuse to deal with a third party that intrudes into the private relationship between patients and their physicians, now, therefore, be it

Resolved, That the House of Delegates of the Mississippi State Medical Association, in regular session assembled in Biloxi, Mississippi, on May 13, 1965, opposes H. R. 6675 and all similar legislation, and be it further

Resolved, That MSMA conduct a statewide educational campaign recommending that all ethical physicians pledge themselves individually not to participate in H. R. 6675 and all similar legislation, and be it further

Resolved, That MSMA inform the American Medical Association and the United States Congressmen and Senators from Mississippi of its continued opposition to Medicare bills, including H. R. 6675.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

This resolution would establish a policy of non-participation by the association with reference to the so-called Medicare bill, H. R. 6675, now pending before the Senate. Specifically, the resolution asked that the Mississippi State Medical Association conduct a statewide educational campaign recommending that all ethical physicians pledge themselves individually not to participate in H. R. 6675 and all similar legislation.

Your reference committee invites the attention of this House of Delegates to Sections 1, 5, and 6 of the Principles of Medical Ethics of the American Medical Association:

"Section 1. The principal objectives of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion."

"Section 5. A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him, and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients."

"Section 6. A physician should not dispose of his services under terms or conditions which tend

to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care."

In the light of these sections, your reference committee recommends that Resolution No. 10 be not adopted.

In discussion, Dr. R. J. Moorhead of Yazoo City, supported the resolution. Dr. Dr. George E. Twente of Jackson and Dr. Eldon L. Bolton of Biloxi discussed the pending business. Dr. Lawrence W. Long of Jackson opposed the resolution and made a motion to table, seconded by Dr. R. B. Caldwell of Baldwyn, and the motion to table was adopted.

ADDITIONAL BUSINESS OF THE HOUSE OF DELEGATES

There were no reports of fraternal delegates. Mrs. Thomas J. Safley of Jackson, 1964-65 Auxiliary president, and Mrs. J. Hurd Gaddy of Long Beach, 1965-66 Auxiliary president, addressed the House of Delegates and were accorded a standing ovation. The Central Medical Society delegation formally invited the 98th Annual Session to meet at Jackson, and the invitation was accepted.

OFFICIAL ATTENDANCE

The official attendance was announced as being 1,002 to include 565 physicians, 202 members of the Auxiliary, and 235 others, a new record for an association annual session on the Gulf Coast.

SPEAKER PRO TEMPORE

The President, Dr. Simmons, announced the appointment of Dr. C. D. Taylor, Jr., of Pass Christian as Speaker *Pro Tempore* in the absence of the Vice Speaker, Dr. Lotterhos, to serve only during the adjourned meeting of the House of Delegates on May 13, 1965.

REPORT OF THE REFERENCE COMMITTEE ON RULES AND ORDER OF BUSINESS

Conduct of Business. Your reference committee commends the Speaker and Vice Speaker for the outstanding manner in which they have conducted business before this House of Delegates. We believe that all members will wish to associate themselves in this commendation and an expression of appreciation to these officers.

Resolution. Your reference committee desires to offer the following resolution for consideration by this House of Delegates:

WHEREAS, The 97th Annual Session of the Mississippi State Medical Association has been conducted at Biloxi, Mississippi, during the period May 10-13, 1965, and

WHEREAS, The annual session has been most profitable and enjoyable for all who have been in attendance, now, therefore, be it

Resolved, That expressions of deep appreciation are made to the officers, Trustees, and Council on Scientific Assembly for the stimulating and useful scientific program; to the managements of all participating hotels, particularly to the Buena Vista, the headquarters hotel; to the press, radio. and television, especially Station WLOX-TV, for coverage of our activities; to the gracious ladies of the Auxiliary who always contribute so substantially to our meetings; to the technical exhibitors and their professional service representatives; to our scientific exhibitors; to our distinguished guests who participated in the Symposium on Parapsychology, Drs. J. B. and Louisa E. Rhine; to all our distinguished out-of-state speakers; and to all who shared in the responsibilities of planning, organizing, and conducting this great annual session.

Your reference committee recommends adoption of this resolution.

The report of the reference committee was adopted.

REPORT OF THE ELECTION OF OFFICERS

President-elect: James T. Thompson, Moss Point.

Vice Presidents: John G. Egger, Drew; Arthur A. Derrick, Jr., Durant; Archie C. Hewes, Gulfport.

Associate Editor: Thomas W. Wesson, Tupelo.

Delegate to AMA: J. P. Culpepper, Jr., Hattiesburg.

Alternate Delegate to AMA: B. B. O'Mara, Biloxi.

Board of Trustees: Mal S. Riddell, Jr., Winona, District 4; John B. Howell, Jr., Canton, District 5; Lamar Arrington, Meridian, District 6.

Council on Budget and Finance: J. T. Davis, Corinth.

Council on Medical Education: William O. Barnett, Jackson.

Council on Constitution and By-Laws: Raymond S. Martin, Jackson.

Council on Legislation: John G. Egger, Drew, District 1; James O. Gilmore, Oxford, District 2; Frank M. Davis, Corinth, District 3.

Judicial Council: E. LeRoy Wilkins, Clarksdale, District 1; Rhea L. Wyatt, Holly Springs, District 2; T. N. Braddock, Jr., West Point, District 3.

HOUSE OF DELEGATES / Continued

Council on Medical Service: Paul B. Brumby, Lexington, District 4; John G. Caden, Jackson, District 5; Guy T. Vise, Meridian, District 6.

Mississippi State Board of Health: Nominated for District 6, Joseph G. McKinnon, Hattiesburg; Earl W. Green, Hattiesburg; James P. Wood, Waynesboro. Nominated for District 7: S. E. Field, Sr., Centreville; Jim C. Barnett, Jr., Brookhaven; Leo J. Scanlon, Jr., Natchez. Nominated for District 8: Harvey F. Garrison, Jr., Jackson; H. C. Ricks, Sr., Jackson; James Grant Thompson, Jackson.

Blue Cross-Blue Shield Directors: S. Lamar Bailey, Kosciusko; M. Q. Ewing, Amory; Joseph B. Rogers, Oxford; James Grant Thompson, Jackson.

Fraternal Delegates: To Alabama, George S. Barnes, Columbus; to Arkansas, Patrick R. Hunter, Greenville; to Louisiana, Victor E. Landry, Lucedale; to Tennessee, Stanley A. Hill, Corinth.

CONSTITUTION AND BY-LAWS

At the close of business, there were pending amendments with reference to scientific membership as presented by the Board of Trustees.

CLOSING CEREMONIES

There being no further business, the Speaker returned the gavel to the President, Dr. Simmons. The Oath of Office was administered to Dr. Everett H. Crawford, the President-elect, by Dr. John B. Howell, Jr., Chairman of the Board of Trustees, after which Dr. Crawford addressed the House.

Dr. James Grant Thompson presented the Thompson Memorial Past President's Pin to Dr. Simmons.

The House of Delegates was adjourned *sine die* at 4:30 o'clock in the afternoon, May 13, 1965.

MASCULINE SINGULAR

Asked why he was still a bachelor, the eligible young physician replied: "I've always seen it this way—a few words mumbled over your head and you're married. Then a few words mumbled in your sleep, and you're divorced."

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EDITORIALS

Medicine as a Hospital Service: Doomsday for Private Practice?

I

When medical service is made impersonal, when the humanities of medicine are removed, when the coldness and automaticity of the machine are substituted for the humane interest inherent in individual service and the professional and scientific independence of the individual physician, the greatest incentive to scientific improvement will be destroyed and the public will be poorly served."

This poignant, gloves-off assertion might have been a direct quote from testimony in opposition to the Medicare bill, but it wasn't. In fact, it was said more than a generation ago when it was proclaimed as official policy of the American Medical Association at the 1930 annual session. Now it applies with almost perfect pertinence to the inevitable consequences of defining medical practice as a hospital service by legislative fiat. What may begin with anesthesiologists, pathologists, physiatrists, and radiologists could tragically end with every physician who cares for patients in a hospital.

There are more than straws in the wind to suggest that the grand design of Medicare runs considerably deeper than government financing of hospital care through the Social Security system. There is a whole bale of hay in the hurricane indicating that a power play is shaping up which portends ill for the scientific and economic independence of the private practitioner. While it is a subtle approach, its objectives are clear enough: Define the practice of medicine as a hospital service, reroute all medical care financing through the hospital, and proclaim the hospital as the center of care.

Tie this concept into the plan for major center-complexes in the heart disease, cancer, and stroke program with the satellite stations, and medical service in the United States shall have been completely reorganized as to distribution, clinical environment, and financing. Should this unhappy day ever dawn, the private practitioner may become as anachronistic as an abacus at a computer convention.

II

Over three decades, the American Medical Association has addressed itself seriously to relations between physicians and hospitals. In 1949, the milestone Hess Report was adopted, declaring it "unethical for any lay corporation to practice medicine and to furnish medical services for a professional fee which shall be so divided as to produce a profit for the lay employer. . . ." The report also stressed that neither the hospital nor

the physician should exploit the patient or each other. In approving a variety of financial arrangements for hospital-oriented medical services, the Hess Committee recognized that hospitals do collect fees for medical services, but a stern requirement was laid down for separating nonmedical costs from professional fees.

The 1950 revision of the Hess Report included its best-known statement of principle: "A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned." The Hess principles were reaffirmed in 1959 and again in 1964.

In the intervening years, salaried practice in and under the aegis of hospitals has grown. Today, AMA asserts from studies and actual membership records, 6.2 per cent of American physicians occupy salaried positions in nonfederal hospitals—one out of every 16 doctors in the nation. By specialty, hospital-salaried practice ranges from a low of 0.7 per cent for occupational medicine to a high of 40.5 per cent for pathology. And with one single exception, every medical specialty has doctors working for hospital salaries. Geographically by states, physician employment in nonfederal hospitals ranges from a low of 1.7 per cent of the doctors in Montana to a high of 10.1 per cent for all Massachusetts physicians. In Mississippi, 4.1 per cent of the profession is so employed.

III

In a comprehensive and exhaustive study of physician-hospital relationships published in 1964, the AMA Committee on Medical Facilities reported that "certain leaders in the field of hospital administration and public health conceive of the hospital not only as a facility for acute inpatient care but also as a logical focus for all-inclusive care, embracing the diagnosis and treatment of outpatients, rehabilitative and chronic (long-term) care, and home care."

The finding of the committee was candidly discussed by Dr. Donovan F. Ward, then president of AMA, when he testified before the Senate Committee on Finance with respect to H.R. 6675, the Medicare bill. Said Dr. Ward: "We vigorously dissent from the thesis that the concentration of specialists in hospitals as full-time employees is the avenue to 'the best possible patient care at the lowest possible cost.' On the contrary, the separation of the specialists from hospital services will undoubtedly reduce costs to patients. It is common knowledge in the profession that in most hospitals, the operation of laboratory and x-ray departments results in excessive charges to patients, charges which substantially exceed the actual operational costs."

Yet, hospital-salaried practice is growing, and in the words of the AMA committee, "to a significant degree physicians themselves have fostered the expanding role of the hospital in providing community health services." When the committee made its initial surveys in 1963, significantly large percentages of physicians and hospital administrators replied that the principles of the Hess Report on physician-hospital relations were not observed locally. Another significant percentage, the committee found, lacked knowledge of the policy. To this extent, then, medicine has a "vote dry, drink wet" circumstance between national policy and local practice.

IV

The four so-called hospital-oriented specialties mentioned often and prominently in the Medicare debate are neither the whole picture nor, for that matter, specialties with the uniformly highest hospital employment. Anesthesiology, for example, has only 8.8 per cent or 568 out of 6,485 members of the specialty in hospital salaried employment. Pathology leads with 40.5 per cent em-



"All right, all right, I'll fix the air conditioner!"

ployed, and physiatry is next with 29.1 per cent. Radiology is third with 22.5 per cent.

Of 11,022 psychiatrists, 23.3 per cent are salaried in nonfederal hospitals. Over 10 per cent of those specializing in cardiovascular disease and thoracic surgery are so employed. Among the nation's 60,000 general practitioners, 1.7 per cent are on hospital payrolls.

It is logical to conclude that the four specialties bandied about in the Medicare debate were a good deal less than the whole story. Except for pathologists, the parties at controversy were talking about 1 out of 12 to 1 out of 4 specialists and not an entire specialty discipline, as sometimes was inferred. But the trend is present, as is a legislative inclination to categorize medical practice as a hospital service.

In three separate instances at the 97th Annual Session last May, the Mississippi State Medical Association's House of Delegates said flatly that it "does reject any definition that would seek to portray the practice of any medical discipline as a hospital service." Throughout the years, the association has subscribed to the principles of the Hess Report. But the facts are clear enough: The decade ahead may find medicine in its greatest trial yet, because the move to reorganize the entire pattern of medical practice in the United States has apparently begun.—R.B.K.

The Bucolic Life: Killer Occupation

It may be so peaceful in the country, according to the nostalgic ballad, but it's also quite dangerous. New studies published by the Metropolitan Life Insurance Company point out that farm accidents claimed 3,300 lives in the United States during 1963, the last year for which complete statistics are available. This is an equivalent death rate of 67 per 100,000 agricultural workers, higher than that for any comparable major industry except construction and mining. Amazingly enough, the farm accident death rate is roughly three times the accident death rate for all U. S. industries combined.

Added emphasis on National Farm Safety Week, observed July 25-31, was no accident, because as with all tragic mishaps, farm fatalities are largely preventable. The Metropolitan studies carried the conclusion that the foremost farm hazard is exposure to machinery. In fact, half of all deaths ascribed to machinery accidents in the nation each year happen on the farm. Yet, only 7 per cent of the total population is engaged in agriculture.

A second major cause underlying farm accidents is the problem of persons working alone, most without supervision and many without sufficient knowledge of the hazards involved. In midwestern farming areas, treatment of injuries is sometimes delayed because of distance factors and severe weather in winter.

Medicine has contributed much to farm safety in the virtual elimination of some occupational diseases, brucellosis, for example. Immunizations have been helpful, but the level of protection among farmers—as well as urban dwellers—is believed to be too low. A challenge presents itself in farm safety, and the physician can be counted upon to continue to contribute to a safe, healthful farm environment.—R.B.K.

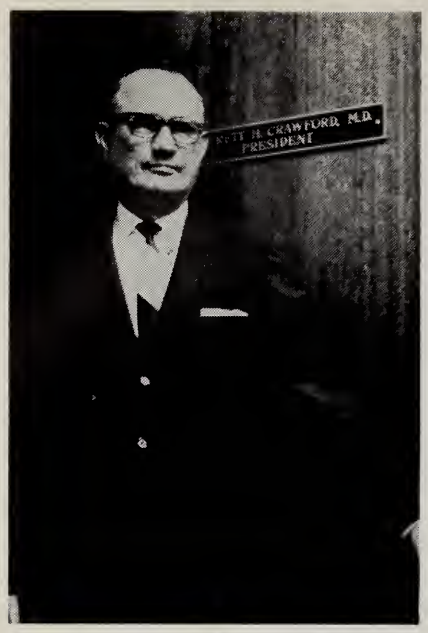
Sechswockenkrankheit

No, it's not a German delicacy of Thüringen sausage and potato pancakes, but it is German and a matter of serious concern in the booming economy of the Bonn republic. Literally, *Sechswockenkrankheit* means "the six weeks sickness." Industrial workers under Germany's extensive social welfare and state medicine program are its victims, but employers suffer, too.

Any West German worker who becomes ill may be indisposed for as long as six weeks and still receive his full pay and keep his job. If the sickness lasts beyond this period, the worker becomes unemployed, and the government pays his full salary for 26 weeks. Of course, the socialized medical program underwrites his care.

There is an amazing tendency, according to reports from West Germany, for almost any illness to last precisely six weeks. So ingrained has welfarism become that many German physicians soberly certify that the patient will be ill for exactly six weeks. Says the Insurance Economics Society of America, commenting on this state of affairs: "Any German citizen who balks at such paid vacations is likely to be regarded as slightly addled," pointing out that even the physicians cheerfully accept fees for care over the entire six weeks' period.

Dependency disease is virulent, and it seems to reach pandemic proportion in the welfare state. In fact, a mere six weeks' episode may soon be properly regarded as a light case.—R.B.K.



The President Speaking

'The Known Quantity'

EVERETT CRAWFORD, M.D.
Tylertown, Mississippi

ADVOCATES OF GENERIC prescribing are probably motivated by good intentions: They want people to pay as little as possible for their drugs, and they want the drugs to be of uniformly high quality. They argue that if the same drug is made by different companies which respectively conform to standards of the *U.S. Pharmacopoeia,* then each of the companies' products will be identical and have identical effect upon all patients. Thus, the advocates for generic prescribing continue, the cheapest is just as good as the most expensive. A sound and logical argument? Unfortunately, no, because this simply isn't the case.

The *U.S. Pharmacopoeia* publishes legal standards to which drugs should conform, and it specifies how much *active ingredient* a drug product should contain. But the formulation of a *medicinal dosage* form is something else again. In fact, U.S.P. states that the actual formulating processes through which active drug ingredients become usable medicaments "are, in general, beyond the scope of the *Pharmacopoeia.*" So two or more would-be identical drug forms may conform wholly to U.S.P. standards, but because of differences in formulation, each may produce quite different results in patients.

Is all this to say that generic name drugs are always inferior to trademark products? Of course not, for some of the most reputable drug makers in the nation market generic products. It is a fact, however, that most substandard drugs are sold only under generic names. A trademarked drug from a known manufacturer is a known quantity, but the generic drug is usually anonymous. The simple fact is that a physician can't always rely on generic quality or probable effect.

More than 90 per cent of all prescriptions written are for brand name drugs. And they aren't all that much more expensive in the long pull, for a study of 10,000 welfare prescriptions by the Rhode Island Department of Public Assistance showed that if generic products had been used wherever possible, the savings would have been only 5 per cent of cost. The case for the known quantity—a drug proudly signed by its maker—is a strong one. ★★★

Book Reviews

Rheumatic Fever: Diagnosis, Management and Prevention. By Milton Markowitz, M.D., and Ann Gayler Kuttner, M.D. With a special chapter on Community Health Services by Leon Gordis, M.D. Volume II in the series Major Problems in Clinical Pediatrics, Alexander J. Schaffer, Consulting Editor. 242 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $7.50.

Rheumatic fever in the pediatric age group is becoming less of a problem with each year. Those diagnosed cases that are still seen are less severe than in years past. However, this disease is still with us and needs to be included in the differential diagnosis of almost all chronically ill children. The streptococcal problem *is* a major one in this area, and is undoubtedly increasing as a cause of pyodema both as epidemics and isolated cases.

Markowitz and Kuttner have published this monograph on Rheumatic Fever in Children that includes an excellent review and treatment of the streptococcal problem. This is Volume II in a series of 5 volumes on major problems in pediatrics. The first, lung disorders in the newborn, was published in April 1964. Volumes on hematological problems of the newborn, congenital heart disease of the newborn and severe infections in childhood are to follow in 1966. Each volume has different authors.

The organization of the material of this book is in a concise easy-to-read form with four appendices that are in themselves worth the price. The changing patterns of rheumatic fever and a detailed biology of the streptococcus are covered in the first three chapters. This review is a valuable introduction to the book.

Rheumatic fever itself is covered by the next eight chapters; first pathology and pathogenesis, then clinical manifestations, diagnosis, and treatment. This is very thorough, detailed, and well written. The next three chapters are delegated to chronic rheumatic fever and recurrences.

Appendix 1 lists the revised Jones criteria in diagnosis. Appendix 2 covers the prevention of the disease in both known and unknown susceptibles. Appendix 3 details the prevention of bacterial endocarditis. Appendix 4 is an excellent description of how to set up a system for doing streptococcal throat cultures in the office at a minimum of expense. One deterrent to obtaining repeated throat cultures is expense to the patient. A small incubator and commercial plates can be read in one day at the office.

I would recommend this 200 page book to anyone who has children in his practice.

Appendix 4 should be studied by every M.D.

WILLIAM F. CALHOUN, JR., M.D.

Proceedings of the Third International Congress of Physical Medicine. Sponsored by the American Congress of Physical Medicine and Rehabilitation, American Academy of Physical Medicine and Rehabilitation. Chicago, Westlake Press, copyright 1962 by the American Congress of Physical Medicine and Rehabilitation. 820 pages with illustrations.

This volume contains all of the papers and translations of abstracts available for publication which were presented at the Third International Congress of Physical Medicine August 21 to 26, 1960, in Washington, D. C. The papers are divided into various groups having to do with: Arthritic and Rheumatic Disorders, Balneology and Hydrotherapy, Cerebral Palsy, Education, Electromyography and Electrodiagnosis, Neurologic and Muscular Diseases, Orthetics and Prosthetics, Role of Government in Rehabilitation, Rehabilitation Services, Scoliosis, Therapeutics, Traumatic Conditions, the Presidential Address and the Tenth John Stanley Coulter Memorial Lecture.

These topics are obviously varied and the papers are not exhaustive, but rather deal with small facets of broad subjects. Generally there is appeal for rehabilitation and for creation of adequate home care programs.

The panel discussion in Section X entitled "Role of Government in Rehabilitation" is informative since the members of the panel are from some highest national levels. The approach by the Norwegians to stimulate all interested groups in the field and not limit running the rehabilitation services to governments is an encouraging one.

A few chapters are of particular interest for the individual interested in public health, some for

the orthopedist, a few for the physical therapist, but generally this book is of most interest to the physiatrist. The latter, who specializes in the practice of physical medicine, are few in number. However, a group in 1950 organized the International Federation of Physical Medicine which sponsored the meeting at which the papers published in this book were printed.

Because of its specialized subjects, this book will have very limited appeal to those groups named above.

GEORGE D. PURVIS, M.D.

NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

CARLSON, DAVID IVAN, Belzoni. Born Bessemer, Penn., Sept. 24, 1937; M.D., University of Mississippi School of Medicine, Jackson, 1962; interned University of Texas Medical Branch Hospitals, Galveston, one year; surgery residency, University of Mississippi School of Medicine, Jackson; elected April 14, 1965, by Delta Medical Society.

CURRIER, ROBERT DAVID, Jackson. Born Grand Rapids, Mich., Feb. 19, 1925; M.D., University of Michigan Medical School, Ann Arbor, 1952; interned University Hospital, Ann Arbor, Mich., one year; neurology residency, University Hospital, Ann Arbor, Mich., three years; member, American Academy of Neurology, the Central Society for Neurologic Research, and the Society of Clinical Neurologists; Diplomate of the American Board of Psychiatry and Neurology; elected June 1, 1965, by Central Medical Society.

PRESTON, WILLIAM HALL, JR., Booneville. Born Nashville, Tenn., Aug. 31, 1932; M.D., University of Tennessee College of Medicine, Memphis, 1959; interned District of Columbia General Hospital, Washington, D. C., one year; ob-gyn residency, Vanderbilt University Hospital, Nashville, Tenn., three years; elected June 29, 1965, by Northeast Mississippi Medical Society.

SMITH, DON LOUIS, Decatur. Born Bogalusa, La., Jan. 5, 1936; M.D., University of Mississippi School of Medicine, Jackson, 1963; interned Mississippi Baptist Hospital, Jackson, one year; elected June 1, 1965, by East Mississippi Medical Society.

WARRINGTON, JAMES EDWARD, Shelby. Born Crowder, Miss., Jan. 22, 1935; M.D., University of Mississippi School of Medicine, Jackson, 1959; interned U. S. Naval Hospital, San Diego, Calif., one year; elected Nov. 7, 1964, by Clarksdale & Six Counties Medical Society.

WHITESIDE, PAUL LEON, Pontotoc. Born Jackson, Tenn., March 15, 1932; M.D., University of Mississippi School of Medicine, Jackson, 1963; interned Mobile General Hospital, Ala., one year; elected Dec. 8, 1964, by Northeast Mississippi Medical Society.

DEATHS

ADEN, AUBREY ANSLEM, Indianola. M.D., Emory University School of Medicine, Atlanta, Ga., 1935; interned Grady Memorial Hospital, Atlanta, Ga.; died June 6, 1965, aged 52.

DAVENPORT, JOHN DRYDEN, Ocean Springs. M.D., College of Medicine and Surgery, Chicago, Ill., 1917; died June 20, 1965, aged 72.

EMERSON, CHARLES WHITLEY, Hernando. M.D., University of Tennessee College of Medicine, Memphis, 1928; interned Baptist Memorial Hospital, Memphis, Tenn., one year; a past president of the DeSoto County Medical Society; died June 26, 1965, aged 62.

FISKE, GEORGE FOSTER, Pascagoula. M.D., College of Medicine and Surgery, Chicago, Ill., 1917; died June 21, 1965, aged 71.

RAY, ROBERT BURRIS, Kosciusko. M.D., Tulane University School of Medicine, New Orleans, La., 1927; interned Baptist Hospital, New Orleans, La., one year; died June 8, 1965, aged 64.

RUSH, HUBERT LOWRY, SR., Meridian. M.D., University of Pennsylvania School of Medicine, Philadelphia, 1921; interned Rush Memorial Hospital, Meridian, Miss.; Fellow, American College of Surgeons and the International College of Surgeons; member, Southeastern Surgical Congress and the Southern Medical Association; a past president of the Mississippi State Medical Association; died June 20, 1965, aged 67.

Dr. Lotterhos Named AMA Section Head; Dr. Hardy Awarded Hektoen Silver Medal

Two Mississippians took top honors in the scientific assembly of the 114th Annual Convention of the American Medical Association at New York with one heading a scientific section and the other winning one of the highest medals for excellence in scientific work.



Dr. Lotterhos

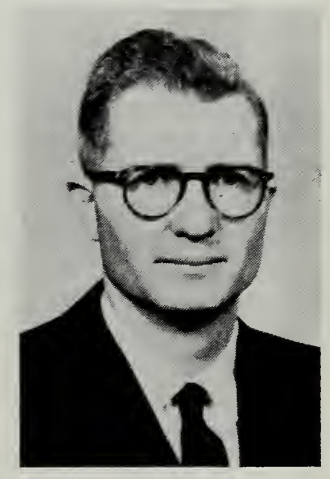
Dr. William E. Lotterhos of Jackson was named chairman of the AMA Section on General Practice, and Dr. James D. Hardy of the University Medical Center was awarded the Hektoen Silver Medal for his exhibit on transplantation of tissues.

The Hektoen medal series, including gold, silver, and bronze, is the top AMA award made annually to exhibits adjudged on the basis of originality and excellence of presentation of subjects on original investigation. A second series of medals, the Billings awards, are made for work not exemplifying purely experimental studies. More than 350 scientific exhibits competed for the recognition.

Dr. Hardy's associates in the award-winning presentation included Drs. Sadan Eraslan, Fikri Alican, Robert D. Williams, Jerry R. Adkins, Patricia C. Moynihan, James B. Grogan (Ph.D.), and Carlos M. Chavez, all of the University Medical Center at Jackson. Dr. Hardy is professor and chairman of the UMC Department of Surgery. The presentation was made during the annual AMA Awards Dinner.

Dr. Lotterhos was elevated from vice chairman of the Section on General Practice to the chairmanship. He will serve during 1965-66 and preside over the section at the 115th Annual Convention next year. Now serving the state medical association as vice speaker of the House of Delegates and chairman of the Council on Legislation, Dr. Lotterhos has participated actively on the national level in scientific activities of the AMA and in organization work of the American Academy of General Practice. He is a past secretary-treasurer of the state association and has chaired a number of key committees.

The Section on General Practice was headquartered at the Barbizon Plaza Hotel where it met June 21-23. At the business meeting, Dr. Lotterhos was named chairman by unanimous action of the section members.



Dr. Hardy

More than 50 of the 350 scientific exhibits received recognition in merit certificate awards by specialty discipline. The top-ranked Hektoen medals were presented to exhibits on functional and morphologic studies of hemorrhagic shock, transplantation of tissues, and total-subtotal replacement of mitral and aortic valves with autologous tissue grafts. Billings medals went to exhibits on stapes surgery, spectrum of gonadal dysgenesis, and lesions mistaken for malignant melanoma of the ciliary body and choroid.

State Agencies Announce Federal CR Regulations

Four agencies of the state of Mississippi which administer more than 25 health and medical programs have issued a joint statement on compliance with the Civil Rights Act of 1964 by private

physicians who participate in the programs. The State Board of Health, Department of Public Welfare, Crippled Children's Service, and Vocational Rehabilitation Division said that compliance by private practitioners will be required by federal agencies working with states in health care programs funded in whole or part by federal money.

The full text of the statement, issued July 6, follows:

"The Civil Rights Act of 1964 places upon all state agencies conducting health and medical programs which are financed in whole or part by public funds certain mandatory compliance regulations. Foremost among these is the rendering of service to eligible recipients without reference to race, color, or national origin and in an environment which qualifies within the meaning of pertinent portions of the law. These pertinent portions as relate to physicians who assist in these programs by rendering service include:

"(1) Compliance or nondiscrimination on the basis of race, color, or national origin from the standpoint of type and quality of service and accommodations in the environment where the services are rendered.

"(2) Patients may be referred for additional services only to medical and health facilities that are in compliance. State agencies, therefore, may refer eligible patients for care only in those facilities and to those individuals rendering professional services who are in compliance with the Civil Rights Act of 1964 and the regulations pursuant thereto.

"To assure fulfillment of all such obligations placed upon state agencies by the law, appropriate notice as to Civil Rights compliance will be furnished physicians at the time of referral and/or with instructions on preparation of statements of charges."

Dr. Marston Named Ole Miss Vice Chancellor

Dr. Robert Q. Marston, University Medical Center director since July 1, 1961, was named a vice chancellor of the University of Mississippi effective this July 1.

Dr. Marston will retain his duties as head of the University Medical Center and dean of the School of Medicine. He will also coordinate other University activities in Jackson, according to Ole Miss Chancellor J. D. Williams.

Dr. Marston came to the Medical Center from the Medical College of Virginia where he had been an assistant dean. In October 1964 he was elected to the six-member executive council of the Association of American Medical Colleges. He is currently serving as chairman of the International Fellowships Review Panel of the National Institutes of Health.

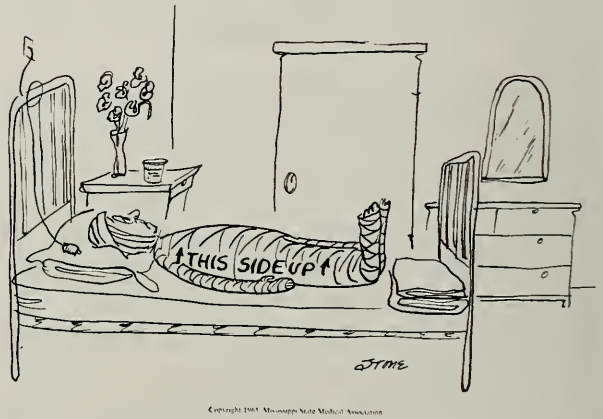
Seminar on Blood Banks To Be Conducted Aug. 12

The second Administrative Seminar on Blood and Blood Banks will be conducted Aug. 12 under the sponsorship of the Mississippi State Medical Association and the Mississippi Hospital Association. Opening at 9:00 for the morning session, the meeting will be convened at the Hotel King Edward in Jackson.

According to Dr. Kenneth M. Heard of Jackson, chairman of the MSMA Committee on Blood and Blood Banking, the seminar will be open to hospital administrators, lab technicians, pathologists, chiefs of staffs, and other professional personnel. Registration will begin at 8:30 and there will be no admittance fee, Dr. Heard said.

Other members of the committee are Drs. C. B. Mitchell, Jr., of Meridian; R. H. Fenstermacher of Vicksburg, and T. F. Puckett, of Hattiesburg.

The day-long seminar will open its morning session with a keynote address by Dr. Everett H. Crawford of Tylertown, MSMA president. Dr. Charles B. Mitchell of Meridian, medical director,



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Southwest Blood Bank of Mississippi, will preside over the opening meeting.

Other speakers and topics scheduled for the morning agenda are "Donor Procurement" by Dorothy C. Smith, R.N. administrator, Jacksonville Blood Bank, Inc., Jacksonville, Fla., and L. Ruth Guy, Ph.D., associate director of the blood bank, Parkland Memorial Hospital, Dallas, Texas; "Standards of Training for Medical Technologists" by Carolyn Slater, M.T., chief medical technologist and training supervisor, Mississippi Baptist Hospital, Jackson; "The Kansas City Case" by Richard Bergen, LL.B., of the AMA Law Department, and "Commercial Blood Banks" by Richard Dice, executive director, Community Blood and Plasma Service, Inc., of Birmingham, Ala.

Following a group luncheon, Dr. Catherine Goetz, presiding officer, will open the afternoon session. First on the agenda is a second paper by Dr. Guy entitled "The Emergency Transfusion and Its Medicolegal Aspects." Dr. Kenneth Heard will discuss "Single Unit Transfusions." Closing the scientific program, Dr. Puckett will moderate a panel on "What's Your Problem?" Panel members will include the day's six speakers.

The first state blood bank workshop was held in 1961. The 1965 seminar has been approved by the House of Delegates.

College of Surgeons Sets Clinical Congress

Progress in surgery on many fronts will be described in scores of reports by surgeons from the nation's leading medical centers and hospitals at the world's largest meeting of surgeons, the annual Clinical Congress of the American College of Surgeons, Oct. 18-22, in Atlantic City.

More than 10,000 doctors and guests from throughout the world are expected to attend the five-day meeting. Dr. John Paul North, director of the College, said that approximately 1,000 doctors will participate in the program, which will include 255 research-in-progress reports, 10 postgraduate courses, 36 panel discussions in all fields of surgery, and 424 scientific and industrial exhibits.

Operations will be televised at the Hospital of the University of Pennsylvania in Philadelphia during this five-day Congress, it was explained. Surgeons in the television audience in Atlantic City may follow the operations on large screens, and, by means of two-way, closed-circuit arrangements, ask questions of the operating surgeons and listen to discussions of the operations conducted by panels of consultants. There will also be new color films on a wide variety of surgical procedures, including 15 in "spectacular" surgery.

Major addresses will be given by incoming president Dr. Howard A. Patterson, New York, clinical professor of surgery, Columbia University College of Physicians and Surgeons; Dr. Julius H. Comroe, Jr., director, Cardiovascular Research Institute, University of California, San Francisco; Dr. Frank H. Mayfield, assistant clinical professor of surgery, University of Cincinnati College of Medicine, and General Alfred M. Gruenther, president, the American National Red Cross.

Dr. Patterson will be succeeding Dr. James T. Priestley, Mayo Clinic, retiring president of the College. Other new officers will be Dr. Willard H. Parsons, Vicksburg, Miss., first vice-president, and Dr. Norman F. Miller, Ann Arbor, Mich., second vice-president.

Honorary fellowships will be conferred upon Professor Oscar Otto Schuberth, Stockholm, Sweden; Professor Fernand Orban, Liege, Belgium, and Dr. Aquilino Villaneuva, Mexico City.

Dr. North said that an innovation this year will be a session on recent investigative reports by established surgeons. Dr. William P. Longmire, Jr., Los Angeles, professor of surgery and chairman of the department, University of California at Los Angeles, will preside over the following program:

Treatment of hemorrhagic shock, Harvey R. Butcher, Jr., St. Louis; Contrasting patterns of thoracic duct lymph formation in hepatic cirrhosis, Allan E. Dumont and Marlys Hearst Witte, New York; Interrelationship of hematogenous and lymphatic tumor cell dissemination—an experimental study, Bernard Fisher and Edwin R. Fisher, Pittsburgh; Computors in the surgical future, James V. Maloney, Jr., Los Angeles; Healing of intra-articular fractures, Henry H. Banks, Boston; Pain in biliary tract disease, Frank Glenn, New York; Seven year surgical experience with 600 hypertensive patients having renovascular operations, Michael E. DeBakey, George C. Morris, Jr., Denton A. Cooley, and E. Stanley Crawford, Houston; Tricuspid replacement: clinical experience with the ball valve prosthesis, Albert Starr, Portland, Ore.

Elevating standards of surgical care throughout the world will be the subject of an open meeting

on medical education on Sunday, Oct. 17, conducted by professors of surgery representing the International Federation of Surgical Colleges, an organization formed in 1958. The American College of Surgeons is the only U. S. member among the 34 international institutions represented. Dr. I. S. Ravdin, Philadelphia, will preside.

On the final evening, approximately 1,100 surgeons will become Fellows of the College. There are now 26,200 Fellows in 83 countries.

Dr. Preston A. Wade, New York, is chairman of the board of regents of the College. Dr. Andrew F. McBride, Jr., Paterson, N. J. is chairman of the press committee for this meeting.

The Dennis and Shelburne will be headquarters hotels. Scientific sessions will be held at Convention Hall and nearby boardwalk hotels.

State Morbidity Reported Through June 25

The Mississippi State Board of Health reports the following occurrence of morbidity for 1965 through the 26th week of the year, ending June 25, 1965. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul.	715
Tuberculosis, O.F.	20
Typhoid fever	3
Encephalitis, infectious	9
Toxoplasmosis	1
Septicemia, Staph.	3
Dysentery	
Bacillary	19
Amoebic	1
Dysentery, NOS	5
Leptospirosis	1
Meningococcal infections	19
Diphtheria	1
Mononucleosis, infectious	30
Hepatitis, infectious	157
Tetanus	2
Helminthic infections	
Hookworm	525
Ascariasis	173
Strongyloides	25
Meningitis, O.F.	20
Histoplasmosis	6
Other Cestode Infestations	6
Salmonella Inf.	12
Gastro-enteritis	1
Streptococcus infections	
Scarlet fever	28
Strep throat	1,031
Pertussis	10
Measles	1,355
Chickenpox	249
Mumps	319
Vaccinia, smallpox	1
Influenza	5,891
Gonorrhea	2,366
Syphilis	
Early	351
Late	52

PERSONALS

G. A. BYNUM has been installed as president of the Hattiesburg Noon-day Optimists.

GEORGE C. HAMILTON, JR. has announced the opening of his office in Jackson for the practice of psychiatry.

RUSH E. NETTERVILLE, GEORGE GILLESPIE, and RAYMOND MARTIN, JR. of Jackson have announced the association of H. RICHARD JOHNSON in the practice of general and thoracic surgery.

SAMUEL R. PATE, JR. of Lexington has begun a residency in psychiatry at the University of Mississippi School of Medicine.

GEORGE D. PURVIS, THOMAS C. TURNER, and WILLIAM B. THOMPSON of Jackson have announced the association of JAMES O. MANNING in the practice of orthopaedic surgery. The group has recently occupied new clinical facilities, the Central Orthopaedic Clinic, at 421 South Stadium Circle.

JAMES A. SHEFFIELD has been named a Fellow in the American Academy of Pediatrics.

JAMES T. THOMPSON, MSMA president-elect, was honored recently by the Moss Point Rotary Club. Dr. Thompson, a past Rotary president, was awarded a plaque recognizing his distinguished community service.

THOMAS E. WILSON, JR., of Jackson has announced the association of THOMAS E. WILSON, III, in the practice of internal medicine.

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION
JACKSON, MISSISSIPPI

September 1965

Dear Doctor:

A new AMA pronouncement has raised the issue of antitrust action against physicians who "conspire" to steer clear altogether of Medicare. Statement says that refusal to participate by physicians "acting in concert" constitutes conspiracy and "would involve exposure to the application of the Sherman Antitrust Act."

> Gist of edict is that no medical society or organized group of doctors can legally decide as a body to stay out of program. Individual physicians, acting on their own, can, of course, refuse any and all Medicare patients. AMA position is directly opposed to that of a few state medical associations.

LSU will open a second medical school at Shreveport, and plans for the facility are already on the drawing board. The Louisiana legislature approved the proposal during the recent financial session. The second unit has support of the Louisiana State Medical Society and the county medical society at Shreveport.

Sen. Philip A. Hart (D.,Mich.) has drawn a bead on ophthalmologists and says he'll introduce a bill to prohibit their dispensing eyeglasses. The Senate Subcommittee on Antitrust and Monopoly - the old Kefauver group - recently concluded investigations and hearings on physician-dispensing. AMA testified against the Hart proposal.

A new high point in hospital cost per patient day was reached in 1964 with a national mean of $41.58 in nonfederal short term hospitals. Studies by the American Hospital Association show West Coast highest with $54.28 per day and South Central, including Mississippi, lowest at $34.31 per day. The 1964 rise was 6.9 per cent over previous year.

The first national directory on areawide hospital planning and related agencies has been published by AMA. The 196 page book lists agencies by location, officer personnel, objective, and purpose. Also contained is a statistical supplement of physician distribution by planning region. Single copies are free to physicians who write AMA at Chicago.

Sincerely,

Rowland B. Kennedy
Executive Secretary

DATELINE - MEDICAL AMERICA

Drinking Figures In Increased Air Fatalities

Oklahoma City - Federal Aviation Agency data show that too many private pilots are fueling up with liquor and taking off for that great saloon in the sky. In 1964, autopsies of 193 pilots in command at the time of crash, 44 per cent of the 436 killed, disclosed that 78 had measurable alcohol levels in the blood. Ten per cent showed levels so high as to indicate states of advanced drunkeness. FAA is studying ways to tighten up on alcohol consumption by private flyers. No such accidents involved commercial airlines.

Draft Rejection Rates Complicate New Calls For Vietnam

Washington - The mental rejection rate of young Americans whose numbers are up may sharply increase problems as the draft call mounts to 35,000 per month from the former 17,000 calls. Selective Service physicians say that today's draftee is really healthier than those of World War II. Medical rejections are stable at about 15 per cent, but stiffened mental requirements have caused an additional 12 per cent rejection rate.

AMA Seeks A New Advertising Agency

New York - The word is out on Madison Avenue that AMA is in the market for a new advertising agency. Fuller Smith and Ross represented AMA in the Eldercare-Medicare campaign, estimated by some to have cost $2 million. The New York Times reported that AMA had received presentations from five agencies in August and that it plans to spend about $1 million in a new institutional campaign. Advertising expenditures already made in 1965 are estimated at about $1 million.

AV's Sponsor New Bills On Animal Research

Chicago - The National Society for Medical Research reports that antivivisectionists groups are initiating a new national effort to oppose laws permitting animal research in legitimate scientific endeavor. Latest bills are H.R.'s 9743 and 9750 which would put stiff controls on interstate shipment of experimental animals. NSMR says bills masquerade as protective measures against "dognapping."

FTC Speaks Up For Physicians On Drug Dispensing

Washington - An unlikely ally, the Federal Trade Commission, has stated officially that it opposes federal action in regulation of physician-owned pharmacies and drug companies. FTC Chairman Paul Dixon declared that medical societies should have jurisdiction over these activities and where they may fail, regulation should go to states. Dixon argues that medical ethics - not federal regulation - should apply to physician dispensing.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
September 1965, Vol. VI, No. 9

ORIGINAL PAPERS

Cardiac Pacemakers

H. H. TIMMIS, M.D.; J. D. HARDY, M.D.;
T. E. BLAKE, M.D., and J. H. CONN, M.D.
Jackson, Mississippi

The development of cardiac pacemakers has constituted a major therapeutic advance in the management of complete heart block and its attendant syndromes. A choice of "fixed rate" pacemaker assemblies is available today with basically similar specifications. At the University of Mississippi Medical Center, the Chardack-Greatbatch implantable unit has been successfully employed. Its application in four patients with heart block of diverse etiology is described.

ALTHOUGH THE DEVELOPMENT of cardiac pacemakers has constituted a major therapeutic advance in the management of complete heart block and the Stokes-Adams syndrome, the concept of repetitive electrical stimulation to produce an effective heart rate is by no means recent. J. A. McWilliam, an English physician, wrote in 1889:[1]

> We want a much more effective and speedy mode of exciting rhythmic contractions, and one that will have a direct and powerful influence in calling forth a series of beats in the depressed or inhibited heart, while at the same time free from the danger of throwing the ventricles into delirium. Such a mode of expectation seems to be available in the form of a periodic series of single shocks sent to the heart at approximately the normal rate of cardiac action.

In 1932, Hyman first reported his experience with a practical cardiac pacemaker that was used experimentally.[2] However, it was not until 1951 that Callaghan and Bigelow successfully employed a pacemaker assembly for the treatment of clinical cardiac asystole.[3] The simultaneous upsurge of interest in cardiac physiology incident to the successful application of cardiopulmonary bypass has resulted in the development of a series of cardiac pacemakers of progressively more reliable and sophisticated design. The insertion of a compact, transistorized, totally implantable unit by Chardack and his associates in 1960 has greatly broadened the application of electrical cardiac pacing.[4, 5] Since that time, several hundred of these and similar pacemakers have been used to restore patients crippled with heart block and Stokes-Adams seizures to full ambulation and useful lives.[6, 7, 8]

From the Department of Surgery, University of Mississippi School of Medicine.

MATERIALS AND METHODS

An improved model of the original Chardack-Greatbatch pacemaker has been employed at the University of Mississippi Medical Center and the Veterans Administration Hospital in Jackson, Miss. (Figure 1). The unit, which is completely encapsulated in Silastic rubber, is capable of delivering a stimulating current of two to ten milliamperes at a rate ranging from 40 to 120 times

per minute. Power is supplied by five long-life mercury batteries with a total potential of seven volts. Both rate and current may be adjusted after implantation by percutaneous needle insertion into the slots of miniature controls built into the as-

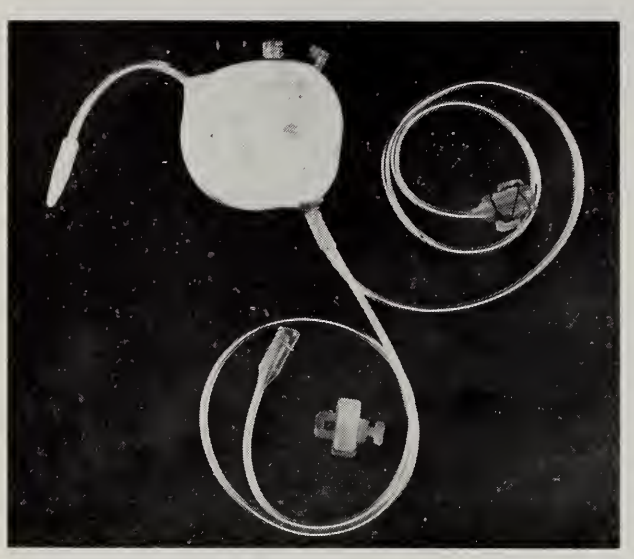


Figure 1. The Chardack-Greatbatch 5-cell pacemaker assembly with adjustable rate and amplitude controls and attached helical spring platinum wire electrodes.

sembly. The myocardial electrodes, which are also ensheathed with Silastic and connected to the unit with a water-tight seal, are composed of a platinum-iridium alloy. This metal stimulates little tissue reaction and, consequently, little change in the cardiac stimulation threshold develops even after long periods of implantation. A third electrode, completely sealed in silicone rubber is present and may be used as an emergency (indifferent) lead in the event of failure of one of the myocardial electrodes.

At some convenient time prior to operative implantation of the pacemaker, a bipolar catheter electrode is inserted through the left median-antecubital vein into the right ventricular chamber. Cardiac pacing is then instituted with an external pacemaker to circumvent the very real danger of cardiac arrest during the induction of anesthesia. The following surgical technique is then employed.

The heart is exposed through an anterolateral incision in the left fourth intercostal space and the pericardium incised anterior to the left phrenic nerve. A subcutaneous pocket of appropriate dimensions is then developed in the left upper quadrant of the abdomen and joined by a sub-



Figure 2. The left lower lobe has been retracted to the right to expose the anterior surface of the left ventricle. The electrodes are shown in place on the myocardium just below the tip of the left atrial appendage.

cutaneous tunnel to the thoracotomy incision. The ventricular electrodes are then passed up through the tunnel into the chest cavity. A suitable, avascular area is chosen over the anterior surface of the left ventricle, and the electrode tips are sutured into position approximately one centimeter apart (Figure 2). The pericardium is then closed loosely, and the electrode cables are posi-

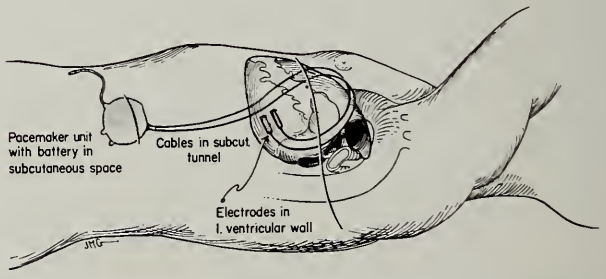


Figure 3. The technique of pacemaker implantation is shown diagrammatically. A large loop of the electrode cables is left in the chest to accommodate the motion of the heart and lungs and to avoid kinking and subsequent fracture of the electrodes.

tioned in the pleural cavity so that there is minimal tugging by the movement of lungs and diaphragm. The rate and amplitude of the assembly are adjusted to produce ventricular contractions 60 to 70 times per minute with the stimulating current set just above the cardiac threshold. The battery unit is then slipped into the subcutaneous pocket which is carefully closed and drained (Figure 3). Within a few days following pacemaker implantation, the cardiac threshold of stimulation may rise slightly, necessitating a readjustment of current amplitude. Postoperatively, the pacemaker assembly can be clearly visualized in site by x-ray (Figure 4).

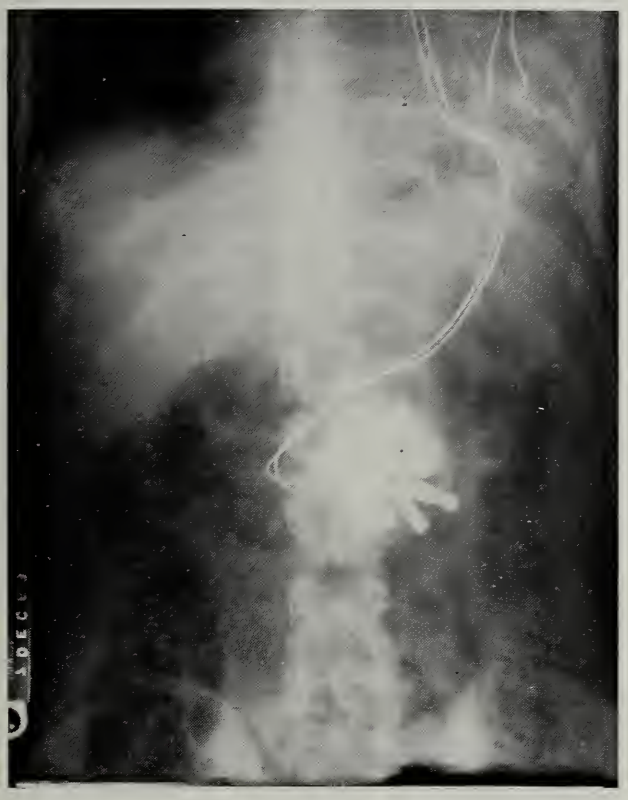


Figure 4. A P-A view of the chest and upper abdomen clearly reveals the internal components of the pacemaker assembly and the wire electrodes. Malfunction of the unit secondary to electrode fracture or the presence of dead cells can usually be diagnosed by x-ray examination.

CASE REPORTS

Case 1. Congenital Heart Block.

R. C., a 28-year-old male, was admitted to the University Medical Center on Dec. 11, 1963, complaining of recurrent episodes of syncope and left-sided hemiparesis since the age of 12 when he had been found to have complete A-V dissociation. Multiple hospitalizations had failed to establish the etiology of his heart block. However, a recent aortic arch arteriogram had revealed a marked decrease in flow through the right carotid when his head was rotated to the left side. Significant physical findings were limited to atrophy and weakness of the extremities on the left side and pulse rate of 35 per minute. An electrocardiogram confirmed the presence of complete A-V dissociation.

On Dec. 3, 1963, with the patient protected by a slow intravenous drip of dilute Isuprel, the right common carotid artery was explored under local anesthesia. No obstructing lesion was noted. General anesthesia was then induced, following which a Chardack-Greatbatch pacemaker was implanted utilizing an anterolateral thoracotomy and a subcutaneous abdominal pocket. The pacemaker rate was set at 68 per minute and the current amplitude increased until continuous pacing was instituted. An excellent cardiac response was obtained and the patient was discharged in nine days after an uneventful postoperative course.

Case 2. Ischemic Heart Block.

J. R., a 44-year-old male, was admitted to the University Medical Center on Jan. 14, 1964, complaining of recurrent syncope and exertional chest pain. One year previously he had sustained a myocardial infarction followed by a second infarction one week later. Since that time a complete heart block had been noted with a ventricular rate of 30-40 per minute. His current pulse rate was 32 per minute and his blood pressure was well maintained at 120/30 mm. Hg. An electrocardiogram confirmed the presence of complete A-V dissociation and the changes of a healed posterior myocardial infarction.

On January 28, 1964, a Chardack-Greatbatch internal pacemaker was implanted and the rate adjusted to 70 per minute. On the fourth postoperative day, his pulse was found to have decreased and subsequent electrocardiogram revealed only intermittent pacing. Current amplitude was increased by percutaneous adjustment of amplitude control, following which he resumed a cardiac rate of 70. The remainder of his hospital course was uneventful.

The patient was admitted to the V.A. Hospital in Jackson on Dec. 4, 1964, again complaining of syncope and anginal chest pain. His pulse rate had decreased to 30-40 per minute. X-ray studies showed no evidence of fracture of the electrode cables and subsequent activation of the "emergency" pacemaker lead as an indifferent electrode failed to institute pacing. It was subsequently de-

termined that the defect lay in the pacemaker itself and that replacement was required. On Dec. 14, 1964, a bipolar catheter electrode was inserted through the left antecubital vein into the right ventricular chamber. Cardiac pacing at a rate of 60 per minute was established following attachment of the leads to a portable "Medtronic" external pacemaker. One day later, the internal pacemaker was exposed through a small incision in the overlying abdominal wall and a new unit connected to the original electrodes. Pacing was immediately resumed by the internal unit at a rate of 70 per minute, following adjustment of rate and current amplitude controls and the external unit was disconnected. The patient had an uneventful postoperative course and was discharged in 10 days.

Case 3. Ischemic Heart Block.

R. R., a 68-year-old female, was admitted to the University Medical Center on Jan. 4, 1965, complaining of recurrent episodes of syncope. She was known to have had third degree A-V block since November 1964, at which time she sustained a myocardial infarction. Treatment with sublingual Isuprel had failed to allay her symptoms. The pulse rate was regular at 40 per minute and the blood pressure was maintained above 120/60 mm. Hg. An electrocardiogram confirmed the presence of complete A-V dissociation.

On Jan. 5, 1965, a bipolar catheter electrode was inserted through the left antecubital vein into the right ventricle. Cardiac pacing at a rate of 60 per minute was established following attachment of the catheter leads to a portable "Medtronic" external pacemaker. Immediate subjective improvement in breathing and substernal distress were noted. One day later, under general anesthesia, a Chardack-Greatbatch pacemaker was implanted utilizing an anterolateral thoracotomy and an abdominal subcutaneous pocket. Pacing was immediately instituted by the internal unit at a rate of 68 per minute following adjustment of rate and current amplitude controls. The patient continued to do well postoperatively and was discharged in 15 days.

Case 4. Myodystrophic Heart Block.

G. O., a 32-year-old male, was admitted to the University Medical Center on Dec. 28, 1964, complaining of progressive weakness and easy fatigue during the past five years and recurrent syncope since April 1964. A complete diagnostic study during a proceeding hospitalization established the diagnosis of myotrophic dystrophy and second degree heart block. No symptomatic improvement had been noted with sublingual Isuprel and Atropine. Physical examination revealed early muscular atrophy over the upper and lower extremities, generalized motor weakness, and delay of relaxation following muscular contraction. A pulse rate of 20 was recorded, although his blood pressure was maintained at 140/80 mm. Hg. An electrocardiogram confirmed the presence of a right bundle branch block with second degree A-V block.

On Jan. 12, 1965, a bipolar catheter electrode was inserted through the left antecubital vein into the right ventricle. Cardiac pacing at a rate of 60 per minute was instituted with a "Medtronic" external pacemaker. On the following day under general anesthesia a Chardack-Greatbatch pacemaker was implanted and pacing instituted by the internal unit at a rate of 72 per minute. On the fourth postoperative day, the patient's pulse rate decreased to 50 per minute and he began to complain of anginal chest pain. Current amplitude was adjusted by percutaneous manipulation of the amplitude control with a Keith needle. Cardiac pacing was again resumed at a rate of 68 per minute. The remainder of the patient's hospital course was unremarkable and he was discharged five days later.

DISCUSSION

Coincident with the development of artificial cardiac pacemakers, increased attention has been focused on the problem of complete heart block. Katz and Pick found 233 cases in the electrocardiograms of 50,000 consecutive patients.[9] Wright *et al.*, reported 90 cases of complete A-V block from the electrocardiographic studies of 50,000 patients observed over a period of 25 years.[10] Their data indicate that it is most commonly observed with acquired cardiac disease although a congenital form has been described, of which Case 1 is an example.

In a series of 251 cases reported by Penton, 42 per cent were associated with coronary artery disease, with or without myocardial infarction.[11] A-V dissociation is also seen with rheumatic and hypertensive heart disease and may occur following diphtheria and other acute myocarditities. Sarcoidosis is reported to be complicated by the Stokes-Adams syndrome in over one half of cases in which cardiac involvement is present.[12] Chagas disease due to *Trypanosoma cruzi* is a major cause of third degree heart block in South American countries.[13]

Complete heart block may be produced during intracardiac repairs adjacent to the conduction system, i.e., ostium primum, A-V communis and membranous ventricular septal defects. However, increasing operative experience in this area and a better knowledge of the conduction system have led to a progressive decline in this untoward event.[14]

Varying degrees of heart block have also been described following nonpenetrating injury of the chest, usually in association with a ruptured interventricular septum. It may also occur with bacterial endocarditis and mycotic ventricular septal defects.[15] A most unusual form of complete heart block is observed with myotrophic myotonic dystrophy (Case 3) and is a premonitory clinical sign in about 20 per cent of cases.[16]

The data from several large series of patients with complete A-V dissociation indicate that the abnormality is four times more common in males than in females.[9, 10, 11] In approximately 85 per cent the arrhythmia occurs after the age of 50, manifesting again the common etiological role of coronary atherosclerosis. The presence of associated abnormalities, principally arising from advanced generalized vascular disease, accounts for the poor survival rate which is reported in this group. However, the 30 day operative mortality has been reduced to less than 5 per cent largely because of the development of an expeditious technique of pacemaker insertion and the use of preoperative pacing with a bipolar intracavitary electrode.[6, 17]

Excluding the apparatus available for emergency external cardiac pacing, four types of pacemakers are now employed clinically for the treatment of complete heart block and Stokes-Adams seizures.

1. An external unit with connectors for transthoracic ventricular electrodes or a bipolar intracavitary catheter electrode. Rate and amplitude adjustable. (Rosenbaum, 1954;[18] Weirich *et al.,* 1958;[19, 20] Thevent *et al.,* 1958;[21] Parsonnet, 1962[22])

2. A battery-powered implantable unit with ventricular electrodes. Rate and amplitude fixed. (Chardack *et al.,* 1959;[4] Zoll, 1960;[23] Kantrowitz, 1961[24])

3. A battery-powered implantable unit with ventricular electrodes and an atrial monitoring lead. Rate synchronous with atrial beat; amplitude fixed. (Nathan, 1962[8, 25])

4. An implantable induction coil with ventricular electrodes. Coupled with external coil and powered by battery or radio-frequency pulse source. Rate and amplitude adjustable. (Glenn, 1959;[26] Kantrowitz, 1962;[7] Schuder *et al.,* 1964;[27] Cammilli, 1964;[28] Abrams, 1964[29])

With the emergence of implantable units the role of the external pacemaker has become largely one of temporary expediency. It is being employed frequently with a bipolar, intracavitary electrode for the emergency treatment of complete heart block and as a safety measure prior to and during the insertion of permanent, implantable pacemakers.[22] It is also commonly used with wire electrodes for the management of actual or anticipated heart block incident to cardiac surgery.

Fixed rate, implantable pacemakers, among which the present Chardack-Greatbatch unit must be included, are usually chosen today for the definitive treatment of congenital or acquired complete heart block. Despite the obvious advantages of synchronous cardiac pacing to stimulate a heart rate above the usual resting level, the less complex units are preferred by most surgeons.[30] Several sound reasons support this preference. Considerably more clinical experience has been obtained with the fixed rate, fixed amplitude pacemakers than with the other types, and the defects which have appeared in time have been largely eliminated. These units contain significantly fewer electronic components than the synchronous pacemaker and those energized by inductive coupling and are, therefore, less subject to mechanical malfunction. There is no question that the features of fixed rate and amplitude are less than ideal in a pacemaker. However, a rate of 60 to 70 usually suffices in these patients who, for the most part, lead sedentary lives because of age or associated disease. Moreover, it has been shown that there is little change in cardiac stimulation threshold after long periods of electrode implantation, lessening the importance of additional components to allow repeated alteration of current amplitude.

Nevertheless, increasing clinical experience with the more sophisticated artificial pacemakers is being obtained by those active in their development and data are now being published on the improved performance of these devices.[6, 31, 32, 33] The application of the "test of time," punctuated by appropriate modifications to produce units of equal or greater reliability than the fixed rate, self-contained models, will undoubtedly lead to their broader use in the future. In the meantime, other avenues are being explored in the experimental animal, notably, the use of biologic energy as a permanent pacemaker power source through the agency of implanted ceramic piezoelectric crystals.[22] Another interesting approach in an early phase of investigation involves the use of implantable Silastic capsules to induce cardiac

pacing by the gradual release of chronotropic drugs such as tri-iodothyronine.[34]

SUMMARY

Four cases have been presented in which complete heart block of differing etiologies was effectively treated by the insertion of a fixed rate, self-contained, implantable pacemaker. The causes of heart block were a congenital abnormality, myocardial infarction (two cases) and an acquired neuromusclar disease. The features of the pacemaker unit employed, and the technique of insertion are described. Other pacemaker assemblies available for clinical use and the direction of current investigation are briefly reviewed. ★★★

2500 North State St.

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Advanced Cancer of the Bladder: Management with Irradiation

OTTIS G. BALL, M.D., and BERNARD T. HICKMAN, M.D.
Jackson, Mississippi

An analysis was made of 55 cases of carcinoma of the bladder treated with rotational cobalt teletherapy at the University Medical Center from 1955 to 1964. The average duration of symptoms prior to diagnosis was an alarming 10.3 months. It was concluded that good palliation of advanced lesions can be achieved easily. Moreover, a significant increase in five year survivals has been reported in early lesions.

Better grading and staging is stressed with the importance of deciding on the most definitive form of treatment early in the course of the disease process. The necessity of close liaison between the family physician, urologist, pathologist and radiologist is pointed out.

CARCINOMA OF THE URINARY BLADDER has been for many years a perplexing therapeutic problem for the urologist and radiotherapist alike. The surgeon has in general been able to control small papillary lesions with good success only to have, in some cases, repeated recurrences and ultimate failure. The larger and more advanced or multiple lesions require quite extensive radical surgery with its subsequent high morbidity and significant mortality. Moreover, surgical treatment of high grade, deeply infiltrating lesions, regardless of technique, yields five year survivals in the range of only 15 per cent.[1] The radiotherapist has, for the most part, been faced with the more advanced lesions in which the only treatment has been for palliation. This has been achieved with minimal success with orthovoltage therapy and with little hope for cure because of the poor patient tolerance of the dosage required; the average five year survival rate being about 5-7 per cent in these advanced cases.[2]

A number of seemingly good long-term palliative results achieved with cobalt teletherapy at this institution during the past several years coupled with the appearance of several encouraging recent reports from other large therapy centers caused us to review our cases since the initiation of this form of treatment at the University Medical Center in 1955.

A total of 55 cases have received cobalt teletherapy at the University Medical Center since 1955. The average age was 62 years with the age range being 34 to 84 years. The sex incidence was 4 to 1 males with a race prevalence of 2 to 1 white.

Table 1 lists the tumor cell types with the percentage of each occurring in this series.

From the Department of Radiology, University of Mississippi School of Medicine.

It is of interest to note the relatively low percentage of transitional cell carcinoma in our series compared with most studies which report an incidence of about 95 per cent for this histo-

TABLE 1

TUMOR CELL TYPES OCCURRING IN 55 CASES OF CARCINOMA OF THE URINARY BLADDER AT THE UNIVERSITY MEDICAL CENTER FROM 1955-1963

Cell Type	*Number*	*Per Cent Occurrence*
Transitional Cell	37	67.2
Squamous Cell	11	20.0
Anaplastic	3	5.4
Adenocarcinoma	3	5.4
Sarcoma	1	2.0
Total	55	100

logical type. On the other hand, an incidence of 20 per cent squamous cell carcinoma was found in our series which compares with a national average of about 8 per cent. The significance of this relatively high percentage of squamous cell carcinoma on our survival figures is uncertain. Moreover, the advisability of drawing specific conclusions of this nature from a series of this small size is doubtful.

Only 32 cases were pathologically graded at this institution and of these 22 (40 per cent) were of a high degree of malignancy according to Broders' grading criteria.[3] However, of importance in statistical analysis is the number of cases that were not graded.

Jewett's staging scheme[4] has been followed previously at the University Medical Center. However, we feel that the more elaborate method offered by Marshall[5] is more satisfactory, and it is the one currently in use here (Figure 1). The cases listed as to stage are tabulated below and here again the striking preponderance of advanced lesions is noted. A total of 49 patients (89 per cent) referred for irradiation therapy had advanced lesions with involvement of the serosa, spread to pelvic structures, or some evidence of local or distant metastasis (stage III or IV). Of interest is the fact that nearly one-half of the cases were recurrent and one-third of these were considered inoperable at the time of their referral to the radiation therapy department.

We feel that a definite difference in response should be expected between patients receiving irradiation for primary tumors and those being treated for recurrent lesions. A less favorable response in these recurrent tumors can be explained, at least in part, by reduced tumor oxygenation due to impaired local vascularity subsequent to multiple surgical procedures. Indeed, this "poor tumor

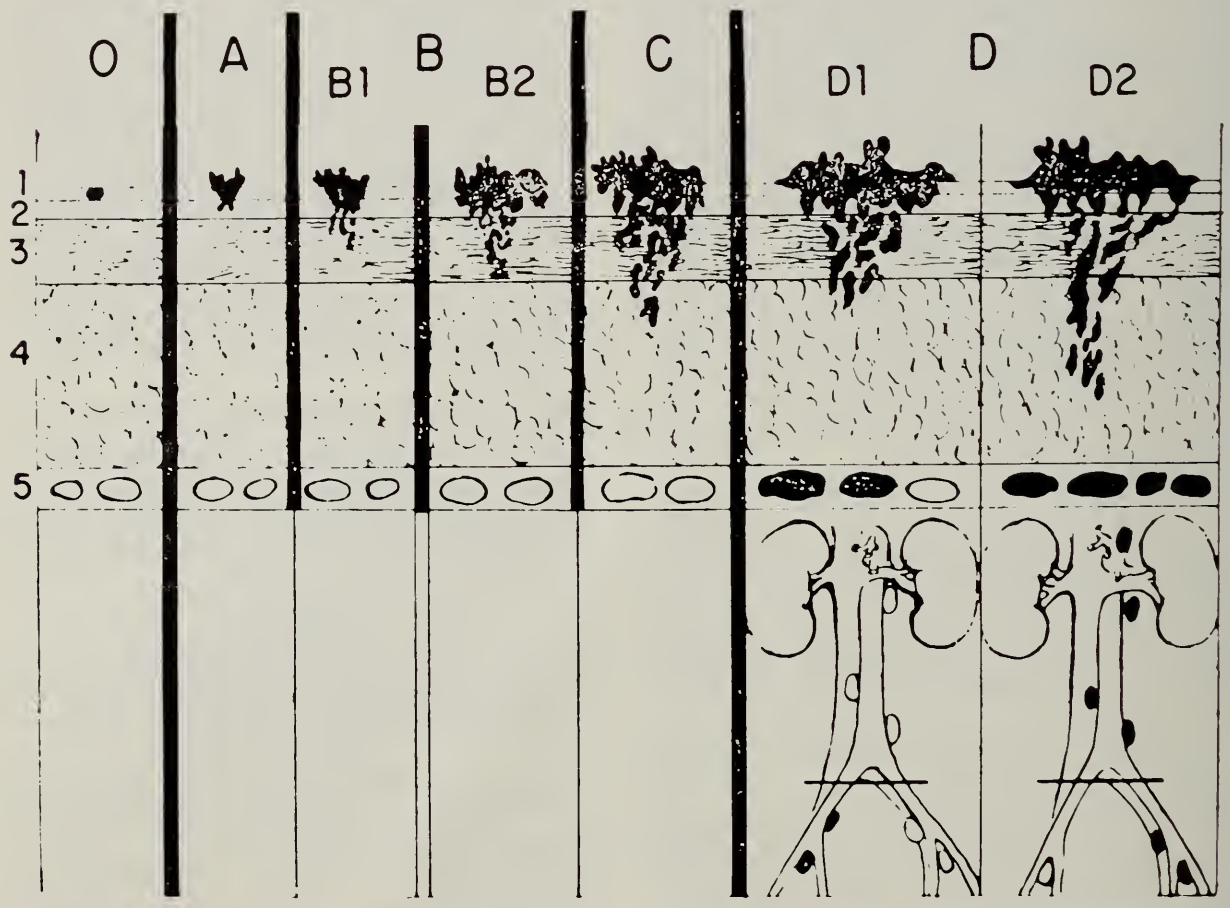


Figure 1. Stages of vesical neoplasms: O = limited to mucosa; A = not beyond submucosa; B1 = not more than halfway through muscle layer; B2 = beyond the halfway level of the muscle layer but not into fat; C = beyond the muscle layer but not metastatic or invading the substance of adjacent organs; D1 = metastatic to the pelvic lymph nodes and/or invading the substance of adjacent organs; D2 = metastatic beyond the pelvis (from Marshall).

bed" may well be a consequential factor in the development of postradiation complications including bladder contracture, segmental necrosis, and stricture formation. However, it should be pointed out here that certain surgical procedures are mandatory for relief of urethral or ureteral obstructions to give adequate drainage and thus reduce or eradicate existing urinary tract infections prior to the initiation of radiation therapy.

TABLE 2

TUMOR GRADES OF 55 CASES OF CARCINOMA OF THE URINARY BLADDER RECEIVING COBALT TELETHERAPY AT THE UNIVERSITY MEDICAL CENTER FROM 1955-1964

Grade	*Number*	*Per Cent*
I	0	0
II	10	18
III	16	29
IV	6	11
Not Graded	23	42
Total	55	100

Bloedorn *et al.*[6] have stressed the importance, however, of delaying irradiation for approximately three weeks following any form of surgical procedure involving the urinary bladder. In this series 34 patients were considered to have primary tumors, but 10 of these cases were deemed to be inoperable and the remaining 24 patients received some form of surgery prior to their referral to the radiation therapy department. Postoperative irradiation was found to be necessary because of gross or pathological evidence of residual cancer or because more radical surgical procedures were contraindicated. Only one patient in this series refused surgery, following biopsy, and thus received cobalt teletherapy as her sole form of therapy. All other patients had undergone single or multiple transurethral resections or fulgurations with 10 patients having had suprapubic segmental resections, and 12 patients having received "radical surgical procedures"—radical cystectomies or prostatectomies or ureteral transplants.

Further analysis of our cases revealed that many patients had been bothered with symptoms referrable to the lower urinary tract for some time prior to the diagnosis of the basic disease process. A large number of patients had received medical treatment for persistent or recurrent urinary tract infections, chronic cystitis, prostatitis, urinary tract stones, unexplained dysuria, frequency, or hematuria for many months to years prior to the diagnosis of carcinoma of the bladder. On the other hand, some patients experienced less severe symptomatology and just failed to obtain medical advice. At any rate it was found in this series of patients that the average duration of symptoms prior to diagnosis was an alarming 10.3 months.

The radiation therapy plan at the University Medical Center has been to deliver a 6,000r tumor dose to the entire bladder in about six weeks with rotational cobalt teletherapy. Of the 55 patients in this series, 40 were treated for cure and received a tumor dose of 6,000r as outlined above. However, 15 patients were accepted for palliative irradiation therapy only, and therefore received anywhere from 1,800 to 5,000r tumor dose. In addition, one patient had received previous irradiation locally to the bladder with radium needles and another with radon seeds. One patient had intracavitary colloidal gold and 8 patients received 5-FU either concomitantly, prior to or following cobalt teletherapy. These ancillary measures have been of little aid in our hands and in the cases cited appeared to offer little, if any, additional benefit in the way of palliation or prolongation of life.

TABLE 3

TUMOR STAGES OF 55 CASES OF CARCINOMA OF THE URINARY BLADDER RECEIVING COBALT TELETHERAPY AT THE UNIVERSITY MEDICAL CENTER FROM 1955-1964 (JEWETT'S METHOD)

Stage	*Number*	*Percentage*
I	0	0
II	6	11
III	22	40
IV	27	49
Total	55	100

The complications secondary to radiation that we have encountered have not been a significant deterrent to therapy for cure. The majority of the patients experience some urinary discomfort in the form of mild to moderate dysuria and bladder spasm as well as occasional hematuria. However, it is sometimes difficult to accurately determine the part played by irradiation in producing these symptoms because most of the patients came to the radiation department with these same symptoms. In addition, these findings would be expected to ensue following tumor breakdown

subsequent to the radiation. Fifteen of the patients had varying degrees of obstruction of the upper urinary tracts and accompanying urinary tract infection. Therapy had to be discontinued in one patient due to severe hemorrhagic radiation cystitis. Thirteen patients experienced mild to moderate radiation proctitis. No severe cases of this disorder were encountered. Two patients expired during therapy. One died of a myocardial infarction, and one was receiving limited palliation therapy for advanced disease and expired from multiple causes.

The average survival figures are listed in Table 4. However, these figures should be reviewed with the realization that these are far advanced lesions. No stage I and few stage II lesions are included in this group. Most of the patients had had multiple recurrences and surgical procedures, and many were of advanced age and had the complicating medical problems subsequent to age. Fifteen of the patients had a degree of urinary obstruction with upper urinary tract infections.

TABLE 4

AVERAGE SURVIVAL FIGURES FOR 55 CASES OF CARCINOMA OF THE URINARY BLADDER TREATED WITH COBALT TELETHERAPY AT THE UNIVERSITY MEDICAL CENTER FROM 1955-1964

Average Overall Survival = 14.2 months	
Survival as to Stage:	
Stage II = 40	months
Stage III = 13.5	months
Stage IV = 9	months
*5 Year Survival = 11%	

* 5 Year Survival Without Tumor = 3 Stage II and 2 Stage III; 5 Year Survival With Tumor = 1 Stage IV.

DISCUSSION

A review of the literature will readily reveal much better results in patient groups having received irradiation therapy.[7, 8, 9] Some of these reports are dealing with highly specialized techniques, however, and consist of selected cases, i.e., early stage carcinomas in young patients receiving irradiation as the primary form of therapy.

It is clear that irradiation has a definite place in the treatment of carcinoma of the bladder. Indeed, it is now considered by most to be the preferred treatment for invasive tumors. This treatment can be given generally on an outpatient basis with little or no morbidity and virtually no mortality risk. The cure rate in early primary lesions is better than surgery alone and should be considered as a necessary adjunct to surgery as the primary form of treatment in all deeply invasive lesions.

However, for radiation or any form of therapy to be effective, earlier diagnosis must be forthcoming. The average duration of symptoms prior to diagnosis in this group was 10.3 months. This is obviously a significant factor in the resulting number of far advanced lesions referred for definitive or palliative irradiation therapy. Earlier diagnoses can be achieved by a realization on the part of the family physician first seeing these patients that in older individuals hematuria, dysuria, and similar symptoms should necessitate a thorough urological work-up with a cystoscopic examination not being postponed too long. In this series, a number of the older men were treated for chronic prostatitis and the women for chronic cystitis for a prolonged period of time without a definitive diagnostic approach, i.e., cystoscopic examination. It is obvious that if these lesions can be diagnosed early, better results will ensue, even in the aged population.

Another important aspect of effective treatment is that of accurate grading and staging. We feel that this can be better achieved with the current cystogram techniques and especially with air-contrast studies of the bladder. The use of the lymphangiogram technique at this institution has added greatly to the staging criteria by demonstrating metastasis to pelvic nodes. It is the present policy here to treat the metastic node-bearing areas in addition to the primary lesion.

With better team work between the family physician, urologist, pathologist, and radiologist, and by earlier definitive treatment, reasonable five year survival results and better palliation should be achieved in carcinoma of the bladder.

SUMMARY

An analysis was made of 55 cases of carcinoma of the bladder treated with rotational cobalt teletherapy at the University Medical Center from 1955 to 1964 with these conclusions:

1. Good palliation of even far advanced lesions can be achieved.
2. Occasional five year cures can be obtained in these far advanced lesions.
3. This form of therapy can be easily administered on an outpatient basis with little morbidity and no mortality.

4. We found no significant advantage of combining chemotherapy with irradiation.

5. There is importance in considering a combined surgical and radiation approach as early as possible.

6. Delay in definitive treatment from the onset of symptoms is a deciding factor in the poor cure rates.

7. More radical therapy should be offered to early lesions, particularly recurrent lesions.

8. Supervoltage irradiation (such as cobalt-60) therapy should be offered to more of the early cases because of its decreased morbidity and increased effectiveness compared to conventional x-ray therapy.

9. Accurate staging with the use of special techniques will aid in defining the type of treatment best suited for the case. Also more attention should be given to the grade and histological type of tumor when considering definitive therapy. ★★★

2500 North State St.

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CAREFUL COMMENTARY

A large American car was parked on a street in Russia. A man stopped to admire it. "What a beautiful Russian car," said he to another man who had stopped. "What magnificient work we do here."

"Idiot," said the second man. "Don't you know this is American."

"Of course," said the first man, "but I don't know you."

Radiologic Seminar XLI: Early Acute Hematogenous Osteomyelitis

ROBERT R. SURRATT, M.D.

Jackson, Mississippi

Any child with a febrile illness and localized bone pain should be considered to have osteomyelitis until proven otherwise. The roentgen findings of acute hematogenous osteomyelitis consist of early changes limited to the soft tissues and later changes involving bone. Since 10 to 14 days separate these two phases, careful evaluation of the early soft tissue findings changes may allow earlier diagnosis and therapy. The author discusses etiology of acute hematogenous osteomyelitis, prognosis, and roentgen evaluation of both early and late bone changes.

THE ROENTGEN FINDINGS of acute hematogenous osteomyelitis consist of early changes limited to the soft tissues and later changes involving bone. As 10 to 14 days separate these two phases, only the early soft tissue findings are of value in prompt diagnosis.

Acute hematogenous osteomyelitis results when blood-borne bacteria lodge and multiply, commonly within the metaphyseal marrow of a growing long bone. This involvement produces a change in the normal soft tissue shadows. A normal extremity radiograph, with adequate soft tissue detail, shows distinct layers of muscle, subcutaneous tissue and skin. Within a few hours of implantation, the distinct boundaries between soft tissue layers are lost (Figure 1). Edema, not always visible clinically, probably accounts for this change. Variable crisscross and transverse faint densities, representing dilated venous and lymphatic channels, appear between muscle groups and between muscles and subcutaneous tissues (Figure 1). Involvement of the soft tissues is extensive, completely surrounding the bone circumference and extending the entire length of the infected bone. Soft tissue swelling in sprains, cellulitis, abscess, and tumors is usually superficial or localized and rarely shows extension along the entire length and circumference of a bone.

After the period of implantation and early growth, destruction and spread is transverse through the bone cortex with elevation of the periosteum by exudate. Various degrees of bone destruction and repair at this stage produce the late roentgen bone changes (Figure 2).

Radiographs for evaluation of early soft tissue changes should show both bone and soft tissue detail in at least two projections. Separate special films may be necessary for soft tissue detail. Views should include the entire length of the involved bone. Comparison views of the opposite normal part are often of great value in detecting minimal changes.

Any child with a febrile illness and localized bone pain should be considered to have osteomyelitis until proven otherwise. In such cases careful roentgen evaluation of soft tissue changes may allow earlier diagnosis and therapy. ★★★

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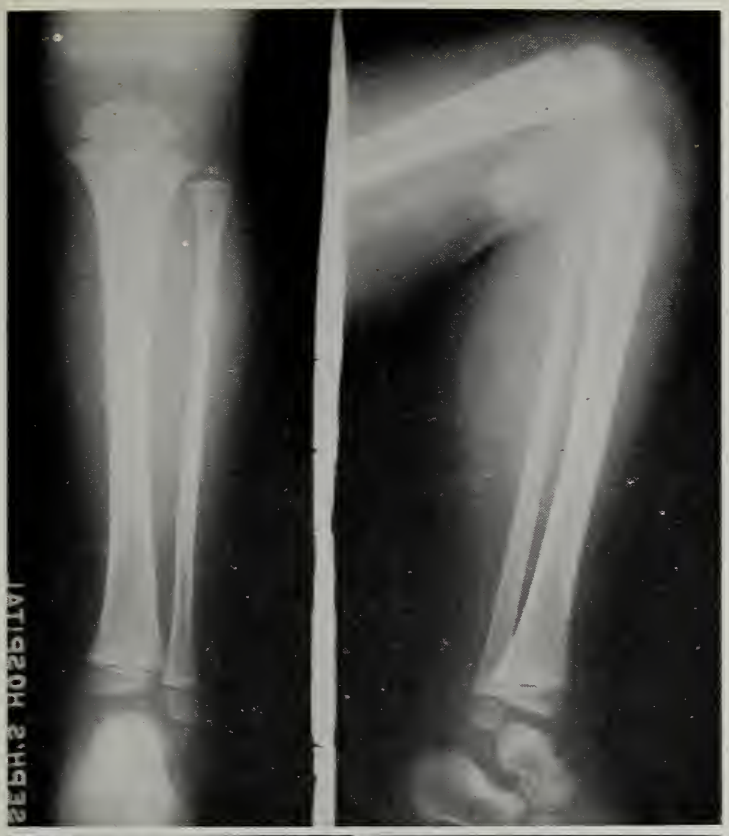


Figure 1. Child with swollen painful leg and fever for six days. Soft tissues show loss of normal boundaries between layers, enlarged venous and lymphatic channels, and swelling.



Figure 2. After 14 days and antibiotic therapy late changes of bone destruction, periosteal elevation, and new bone formation are present. Soft tissue shadows are greatly improved.

Clinicopathological Conference LXVIII

Conducted by the Department of Pathology
Mississippi Baptist Hospital
Jackson, Mississippi

THIS 73-YEAR-OLD white male was admitted to the Mississippi Baptist Hospital on Feb. 4, 1965, because of the inability to void over a period of 24 hours. The referring physician stated he also wanted him to have a checkup because "he has not been feeling well for several weeks." There had been a question of jaundice a few weeks before, but the referring physician was not sure about that. The patient had also had some abdominal discomfort, but denied any change in the color of urine or stool. He also gave no history of hematemesis, melena, basic change in weight, or change in bowel habits.

There was no history of the use of alcohol, and there was no history of hepatitis in the past. The patient did state that he had had difficulty in voiding at intervals over two years. He denied any gross hematuria. The patient had an operation for a bilateral inguinal hernia in 1957 with apparently an uneventful convalescence. At this time there was no history of any serious complaints or illnesses or febrile episodes. On that admission routine blood examination was negative, the urinalysis showed 3+ albumin and a sediment "loaded" with WBC.

On physical examination, it was noted that the patient was a well-developed, well-nourished white male, appearing to be in no particular distress with a "yellow tint" to the skin. Blood pressure was 140/80, temperature 98.6°, pulse 72. A close examination did not reveal an icteric tint to the sclerae. Examination of the abdomen revealed the liver edge to be palpable three fingerbreadths below the right costal margin, firm and nontender. The spleen was not palpable. The prostate was 3+ enlarged.

The urinalysis showed a 2+ albumin with 8 to 12 red cells and innumerable white cells per HPF. The specific gravity was 1.008. A complete blood count showed a white count of 14,650 with a hematocrit of 36 vol. per cent. Sedimentation rate was 56 mm. per hour. The differential study showed 2 monocytes, 3 lymphocytes, 89 segmenters and 6 bands. One nucleated red cell was noted in the differential smear and there was 3+ toxic granulation noted. The serum bilirubin was 4.6 mg. per cent with a blood sugar of 102 mg. per cent, and a thymol turbidity of 1 unit. The total protein was 5.8 gm. with a serum albumin of 2.32 gm. as opposed to 3.48 gm. of serum globulin. Blood urea nitrogen was 105 mg. per cent, and serum transaminase was 60 units. VDRL was nonreactive. On admission, the x-ray of the chest showed moderate cardiac enlargement with vascular structure showing some prominence in the lung fields which reflected some degree of congestive changes. The gallbladder series showed no concentration of dye. Upper GI series were essentially negative. Colon x-ray revealed diverticulosis of sigmoid colon.

In this month's Clinicopathological Conference, Dr. C. Ralph Daniel, Jr., discusses the case of a 73-year-old white male admitted because of the inability to void over a period of 24 hours. The cardiovascular system was apparently involved with some cardiomegaly and congestive changes in the lungs. The patient also had liver disease with enlargement, an elevated serum bilirubin without an elevated alkaline phosphatase, a slightly elevated transaminase, with a normal thymol turbidity and an elevated cephalin flocculation. The renal system was also involved. The patient had an enlarged prostate, a markedly elevated BUN and creatinine, and findings in the urine of albumin and many pus cells.

Other discussers are Drs. Julian Weiner, Louis Schiesari, and Samuel L. Stephenson.



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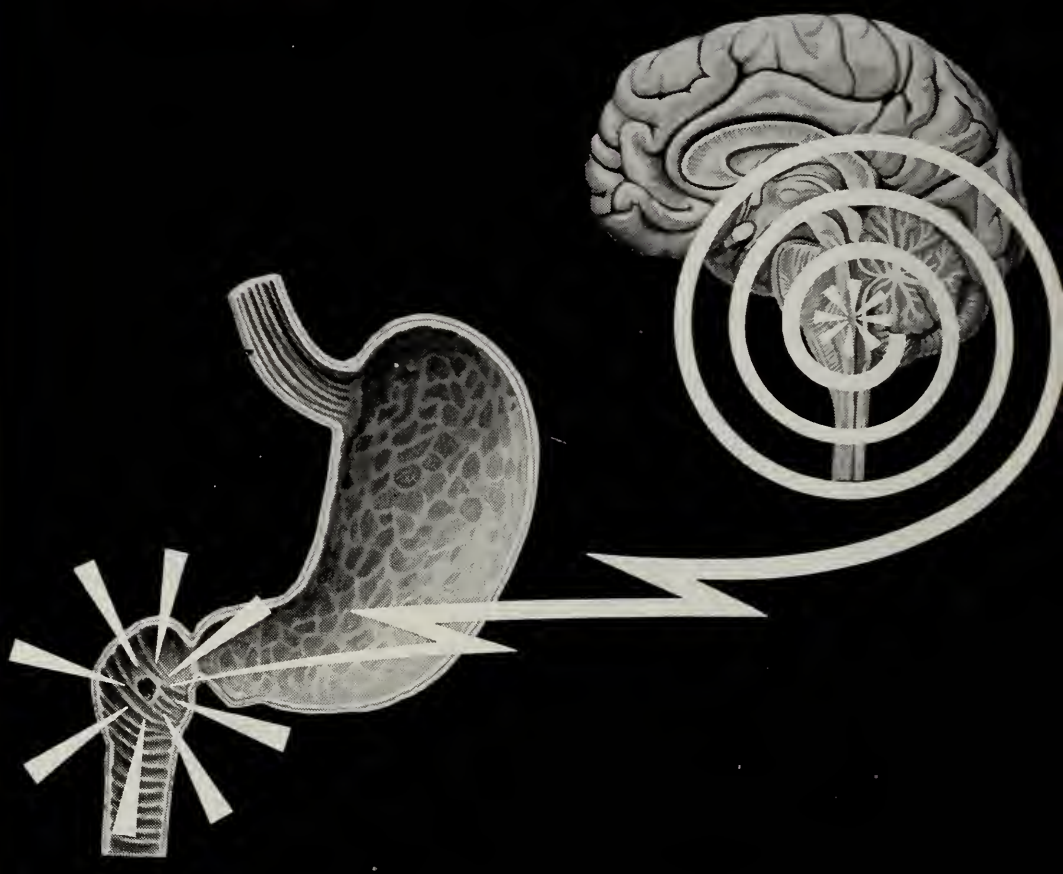
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Two days after admission, further blood work revealed serum amylase of 96 units, and a total bilirubin of 4.52 mg. per cent. The serum chlorides were noted to be 575 mg. per cent with a serum potassium of 4.5 mEq. and a serum sodium of 127 mEq. Creatinine level at this time was 4.25 mg. per cent. Serum alkaline phosphatase was 10.7 units. A blood urea nitrogen on this date was 117 gm. per cent. The hydrogenase was 320 units. Creatinine four days after admission was 5 mg. per cent with a blood urea nitrogen of 120 mg. per cent. A 4+ cephalin flocculation was interpreted 48 hours after admission. The serum transaminase four days after admission was noted to be 46 units.

On the morning of the patient's death, serum amylase was 96 units, the serum bilirubin was noted to be 4.5 mg. per cent. His blood chlorides were 575 gm. per cent, with a creatinine of 4.25 mg. per cent and a serum alkaline phosphatase of 10.7 Bodansky units. The serum potassium was 4.5 mEq., and the serum sodium was 127 mEq. The blood urea nitrogen was 117 mg.

It was the opinion of the urologist that this was uremia, probably due to benign prostatic hypertrophy with obstruction. He also considered hepatic disease and a ventral hernia. An intravenous pyelogram was considered if the BUN dropped lower. It was noted on the second day of hospitalization that the patient seemed to be "slightly mentally confused," and it was felt that this was due to the uremia.

On the second day of hospitalization Declomycin was started as a urinary antibiotic. On the third day of hospitalization the patient was more confused, and it was again noted that the liver was three or four fingerbreadths below the right costal margin and quite hard. Catheter drainage had been instituted by the urologist and a few clots had been irrigated from the bladder. It was felt that cystoscopy had to be seriously considered in the immediate future.

Discussion was held relative to an emergency procedure of bilateral renal catheterization, but it was felt that this should be postponed a short time due to the precariousness of the situation. On the fifth day of hospitalization, at 12:15 noon, the patient experienced an acute hypotensive episode. Vasoxyl was used. Due to an almost complete renal shut-down, fluids were given cautiously, and electrolytes were rechecked. At this time, it was decided to go ahead and cystoscope the patient within the next few hours if his condition warranted it.

At 8:00 p.m. of that day, it was noted that his blood pressure was 80/60 and the condition was critical. It was felt that this was an increasing evidence of hepatic coma, and no urinary output had been present for several hours. At 7:45 a.m. of his last day of hospitalization, the patient seemed to be more alert and a little stronger. At this time patient was being treated with multiple enemata, corticosteroids, intravenous R-gene, Neomycin—12 gm. being instilled into the gastrointestinal tract, and wide-spectrum antibiotics. On this morning, consultation was held relative to going ahead with the bilateral cystoscopy, but the patient expired at 8:25 a.m. of the sixth day of hospitalization.

DISCUSSION

Dr. C. Ralph Daniel, Jr.: "We have here a man who shows a yellow tinge to skin, vital signs normal, liver palpable three fingerbreadths down, prostate enlarged 3+. There were no other physical findings. The positive laboratory work can be summarized as follows: urinalysis had 2+ albumin, 8 to 12 red cells, numerous white cells, low specific gravity. CBC revealed a 14,650 white count with a shift to the left, a 36 hematocrit, and a sedimentation rate of 56. Serum bilirubin was 4.6 mg. per cent. Blood sugar was normal. Thymol turbidity was normal. Total protein was 5.8 with reversal of A/G ratio. BUN was 105. Transaminase was 60, units slightly elevated. Chest x-ray showed moderate cardiac enlargement with some congestive changes. Gallblader showed no concentration of dye, of course, with the bilirubin and liver disease. GI examination was normal. Colon examination revealed diverticulosis. That is the summary of the history, physical examination, and laboratory work that we have available to us.

"Two days following admission there was no significant change in amylase or bilirubin but electrolytes revealed a low serum sodium with normal other electrolytes. Creatinine was 4.25. Alkaline phosphatase remained normal. BUN had risen to 117 mg. Hydrogenase was normal. Creatinine had risen to 5 mg., and BUN had gone on up eventually to 120 mg. per cent. The patient had a 4+ cephalin flocculation. Transaminase had dropped to 46 units. On the day of death, amylase was still normal, bilirubin stable, electrolytes stable as they were before with no changes of sodium, the rest normal. The BUN remained comparatively stable. The third day of hospitalization the patient became confused, and there was a renal shutdown with a hypotensive episode.

"We have here a patient who is in uremia and has a low serum sodium. An apparent cause of the uremia is a prostatic hypertrophy and an

inability to void. Also, there is a possibility of liver disease diagnosed by a slight rise in SGOT, definitely elevated serum bilirubin, and some apparent enlargement of the liver with a firm edge. In general, we have a man in his seventies who has three systems involved.

"We do not have an electrocardiogram, but the patient does have apparently some cardiomegaly with congestive changes in the lungs. He has apparently disease in the liver with enlargement, an elevated serum bilirubin without an elevated alkaline phosphatase, a slightly elevated transaminase, with a normal thymol turbidity and an elevated cephalin flocculation where we have conflicting cellular type of jaundice versus obstructive type of jaundice. The hematocrit is 36. The renal system is apparently also involved. He had an enlarged prostate. He has a markedly elevated BUN and elevated creatinine, and findings in the urine of albumin and many pus cells.

"In a man this age, certainly the most likely cause of death by far is arteriosclerosis, and I believe we certainly have to assume that this man had some arteriosclerosis. The second most likely cause of death is neoplasm. There are many other diseases such as amyloidosis that could give you transsystem involvement such as this, but there are no clues on the physical, the history, or the laboratory work to indicate any limbs on which one would want to go out and hang himself, so I am going to stick with the two most likely diagnoses which are arteriosclerotic involvement and neoplasm. I will talk a little bit about both of these as to how they could give the picture or the combination of the two.

"Certainly, arteriosclerosis could easily give the cardiomegaly and the congestive changes in the lungs. It could also give the elevated BUN, certainly, along with infection as indicated by the elevated white count as well as the prostatic hypertrophy and apparent obstruction in the urinary tract. So, everything but the liver disease could well be explained by arteriosclerosis. You could go out on a limb a little bit and say that the man had an anuerysm which caused pressure on the ducts and could give the elevated bilirubin without giving an elevated alkaline phosphatase, maybe have a little elevated SGOT with a normal thymol turbidity and an elevated cephalin flocculation. While that's all conflicting if you wanted to fit it all into one disease process, all right we could do it that way.

"Now, the other possibility that I want to consider is a neoplasm. One neoplasm which would fit fairly well with this picture would be multiple myeloma. You do get liver involvement. You do get elevated BUN. You do get reversal of your A/G ratio. You do get the picture as manifested here and of course you could get the congestive heart failure to go along with the general debility and age of the patient with arteriosclerosis certainly involved. Also, a neoplasm of the prostate or of the GI tract could be with metastasis to the liver to give a blockage elevated BUN. The only other cause, of course, of an elevated bilirubin such as this would be a breakdown of red blood cells. They do not give us an increase of the type of bilirubin that was found. This is a possibility though the man's hematocrit remained apparently at 36, since it was not checked again. So, I am going to go on the limb to this extent of saying this man most likely had a neoplasm. I will not give a definite location of the neoplasm, but it would be more likely of the multiple myeloma, GI, carcinoma, or primary liver carcinoma with metastasis, and this man had generalized arteriosclerosis with prostatic hypertrophy."

Dr. Julian Weiner: "Didn't you say he had a 3+ albumin?"

Dr. Daniel: "Yes, he had a 3+ albumin, and he had pus cells in the urine."

Dr. Weiner: "What about the possibility of polycystic renal disease with cystic disease of the liver which is often associated with it?"

Dr. Daniel: "Yes, however, his age is much against this being polycystic renal disease."

Dr. Louis Schiesari: "Dr. Stephenson, would you like to make any comment?"

Dr. Samuel L. Stephenson: "Our opinion was that this was a pyelonephritis with secondary uremia. We also felt that liver disease in the form of postnecrotic cirrhosis with probable hepatoma was a strong possibility. It was believed these two diagnoses were paramount in the "hepato-renal syndrome." Amyloidosis was not considered because of 1+ albumin and because palpation of the liver convinced us this was hepatoma. Coronary artery disease, of course, was also considered."

AUTOPSY REPORT

Dr. Schiesari: "Thank you, Dr. Daniel, for your lucid and convincing discussion. But don't worry about the ultimate diagnosis. The final condition that complicated this patient's illness is never diagnosed before the autopsy. In those cases in which the diagnosis is made in vivo, the postmortem examination proves it wrong.

"At autopsy, the peritoneal cavity contained approximately 800 cc. of clear, watery fluid, and about 400 cc. of the same fluid was found in each pleural cavity. The prostate was enlarged to about four times its normal size; the prostatic urethra

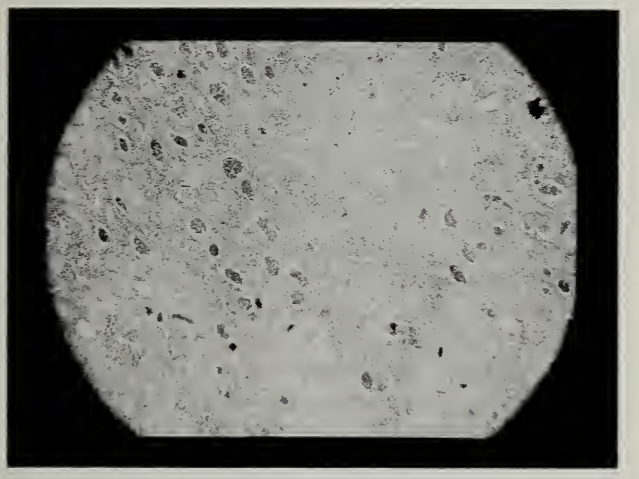


Figure 1

was obstructed by a prominent, movable, almost pedunculated middle lobe. The kidneys were enlarged and baggy, the left one weighing 380 gm. and the right one 270 gm. The markedly dilated calyces and pelves contained a dense, yellowish, purulent fluid. The cut surfaces were punctuated with abscesses. This was obviously a far-advanced pyonephrosis. The spleen was moderately enlarged weighing 180 gm. It had a peculiar, yellowish-gray color, and even a more peculiar consistency—it was hard and brittle. The liver weighed almost 2,000 gm.; it was moderately and uniformly enlarged and definitely increased in consistency.

"Microscopic examination of the kidney (Figure 1) showed the collecting tubules to be plugged with a dense, acute exudate which also infiltrated the surrounding parenchyma diffusely or forming

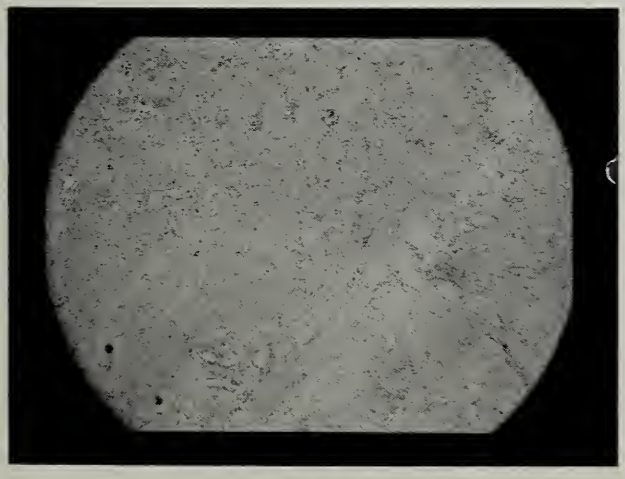


Figure 2

abscesses. This is the characteristic picture of an ascending nephritis. Sections of spleen (Figure 2) showed both the white and red pulps to have been completely wiped out and replaced by a homogeneous, pale pink, eosinophilic substance. Remnants of enlarged sinusoids were still present. Sections of liver (Figure 3) showed the architecture to be preserved. Two changes were noted. First, when we followed the cell plates from the

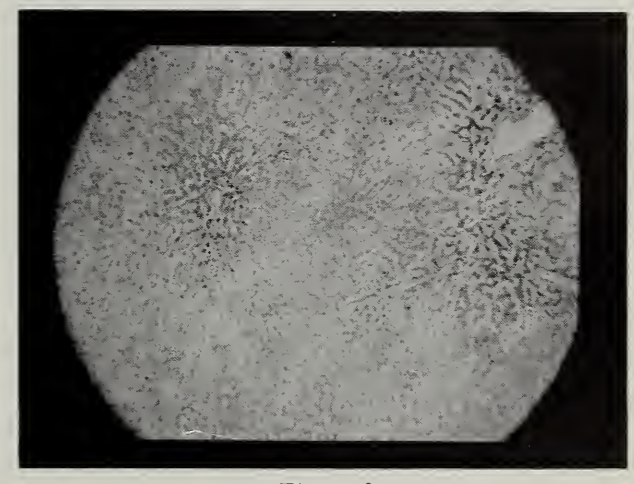


Figure 3

central portion of the lobules toward the periphery, we could see that they faded out, being progressively replaced by homogeneous, pale pink eosinophilic material. The second change was represented by an abundant deposition of bilirubin

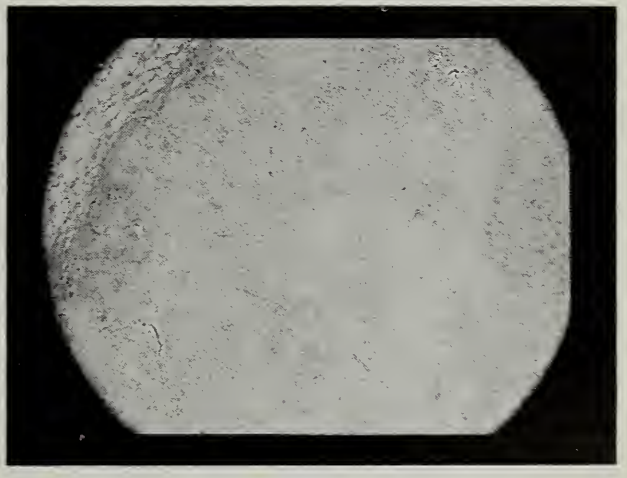


Figure 4

pigment in the central portion of the lobules; in addition, here and there, there were canaliculi plugged by bile thrombi. With these two changes, hepatic cell degeneration and intrahepatic cholestasis, we can readily explain both the patient's jaundice and the abnormal results of the liver function tests.

"Sections of adrenals (Figure 4) revealed that these organs were undergoing the same fate, name-

ly replacement of the parenchyma by this homogeneous, pale pink substance. A section of spleen was stained with crystal violet which, like methylene blue or toluidine blue, is a metachromatic dye. These dyes when applied to tissue, for example cartilage or mucinous epithelia, containing mucopolysaccharide, change their original blue color to a rose-purple one, hence, the name metachromatic.

"The peculiar substance with which we are dealing in this case and which I am sure you have already correctly identified as amyloid, behaves in the same way. In fact, amyloid is a complex protein mucopolysaccharide, the protein moiety being represented mainly by gamma globulins. It is conceived as an in situ product of the fixed cells of the reticulum endothelial system. These cells, after a long period of hyperactivity and over production of antibodies, enter a phase of exhaustion during which they are unable to cope with production of antibodies and react in an abnormal manner by depositing this substance that we call amyloid. Recently and quite aptly this substance has been termed gammaloid and the entire process gammaloidosis to emphasize the important role played by the gamma globulins in the production of the substance itself. The whole process has been concisely expressed with two words: dysglobulinemic reticulopathy. It is postulated that in the long-standing illnesses in which sooner or later amyloid is going to be produced, the ground substance is severely damaged. It breaks down with liberation of one of the mucopolysaccharides, probably the chondroitin-sulfuric acid, which enters the plasma where, being a foreign substance, it acts as an antigen and calls forth antibodies.

"It is worthwhile to mention the fact that in recent years an increasing number of cases of rheumatoid arthritis and also of Hodgkin's disease or some other lymphoproliferative diseases complicated by amyloid have been reported. This apparently is a result of the treatment. The cortisone and ACTH given in rheumatoid arthritis suppress or depress, as you know, the antibody activity of the reticuloendothelial system and in so doing they accelerate the exhaustion phase mentioned before, so enhancing the deposition of amyloid. In the same way act the x-ray given for treatment of Hodgkin's or other lymphoproliferative disease.

"At this point it is customary for the pathologist who conducts a CPC in which amyloid is involved to indulge in a lengthy and detailed subdivision of amyloid disease dividing it in to primary and secondary or atypical and typical amyloidosis, tumor forming amyloidosis, and amyloidosis with multiple myeloma. To these one could add the peculiar amyloidosis described in groups of Portuguese families and so we have the Portuguese amyloidosis and the amyloidosis complicating the familial Mediterranean fever. But I think we can lump them together considering them different manifestations of the fundamentally same process, namely a dysglobulinemic reticulopathy."

★★★

1190 North State St.

SIGN OF STRAIN

The old office which the small town doctor occupied had just two windows. One was easy to raise, but the other always stuck and gave him trouble. Appropriately enough, he had them labeled "His" and "Hernia."

Case Report XII of the Maternal Mortality Study: Ruptured Uterus

WILLIAM B. WIENER, M.D.
Jackson, Mississippi

THE FOLLOWING MATERNAL DEATH was recently reviewed by the Committee on Maternal and Child Care of the Mississippi State Medical Association. This death is one which was due to hemorrhage following traumatic rupture of the lower uterine segment.

CASE NO. 429-02950-64

This 27-year-old white female, gravida 6, para 5, was first seen when approximately three months pregnant, the expected date of confinement being March 15, 1964. Her past history was essentially negative. She denied any pelvic surgery and had had no complications with any of the other pregnancies. All five previous pregnancies went to term, and all the children were living. Her blood was type A positive, and serology was negative. The blood work and urine on the first and subsequent visits were within normal limits and her blood pressure was always normal. She had been seen 12 times prior to admission to the hospital. She had been on a diuretic for edema for the last three months of the pregnancy.

When examined on March 15, 1964, in the office the vertex was over the pelvis. Fetal heart tones were good, and it was thought that the patient would soon go into labor even though the cervix was closed and firm. A week later she was admitted to the hospital at 1:30 a.m., in early labor, and on vaginal examination at this time, the cervix was found to be closed and no presenting part could be felt in the pelvis. On abdominal examination, the breech was thought to be presenting. For this reason, it was decided to try to stop labor in order that an external version might be attempted, so she was given 100 mg. Demerol. Labor progressed, however, and by 3 a.m. the cervix was 5 cm. dilated and small parts could be felt presenting.

She was immediately taken to x-ray and a flat plate of the abdomen made. This confirmed the clinical impression that the breech was just above the pelvis and was presenting. Just as she returned from x-ray, the membranes ruptured, and an immediate examination revealed the cord and an arm in the vagina. The cord was pulsating so she was hurriedly taken to the delivery room and put up for delivery. The cervix was found to be almost completely dilated, but by this time, no pulsations could be felt in the cord. It was thought that if the baby could be delivered immediately, it might be resuscitated. Sodium Pentothal was given intravenously for anesthesia and a version and extraction was done. This was a relatively easy procedure and a 7 lb. 14 oz. stillborn male was delivered at 4:30 a.m. All attempts to resuscitate the baby were unsuccessful.

Within three to four minutes after the baby had been delivered, the placenta was spontaneously delivered. The uterine cavity was then explored manually, and the cervix inspected. No abnormality was noted. Ergotrate 0.2 mg. was given intravenously immediately after delivery of

Case Report XII of MSMA's Maternal Mortality Study concerns a 27-year-old white female, gravida 6, para 5, with a transverse presentation and a closed cervix. The case report is evaluated on the basis of adequacy of data, cause of death, avoidability, and factors of avoidability, and a detailed discussion is presented.

Obstetrician-gynecologist member, Committee on Maternal and Child Care, Council on Medical Service.

the placenta. She was taken from the delivery room to her room and about two hours later, around 6:30 a.m., a nurse noticed that the patient's pulse was weak and so rapid that it could not be counted. She immediately notified the doctor and 1 cc. of Wyamine was given intramuscularly and this was repeated in 30 minutes but still the blood pressure would not rise above 50/0. Nasal oxygen and an infusion of 1,000 cc. of 5 per cent dextrose in water with one cc. of Hypertensin was started.

About this time, profuse vaginal bleeding was noted. Blood was taken for typing and matching and, while waiting for the blood, 500 cc. of Plasmanate was started in another arm. As soon as the blood was obtained, which was around 7:30 a.m., 500 cc. of O-Negative blood with 50 mg. of Benadryl was started. By this time there was some difficulty with the veins, and a cut down was done on a leg vein and a canula inserted. Vaginal bleeding continued, and two ampules of Pitocin was added to the IV Drip which contained the Hypertensin. During all this time blood pressure was below 50, and the pulse rapid and weak. The uterus would contract and relax.

At 8:30 a.m. a second unit of blood was started with 100 mg. of Cortisone added. The patient's color was better and blood pressure rose to 80/0. At 10 a.m. she was taken to the operating room and the abdomen opened. Approximately 1,000 cc. of blood was found in the abdominal cavity, and there was a laceration in the right side of the uterus with a hematoma in the right broad ligament. A supracervical hysterectomy was done and, during the procedure, two more units of blood were given. At the end of surgery the blood pressure dropped below 50, and the pulse became weak and rapid. Three more units of blood were administered and, approximately an hour after the end of surgery, the blood pressure was 70/0 with pulse of 140.

At surgery, an indwelling catheter had been placed in the bladder, and it was noted that the urinary output was good. Two hours after surgery the blood pressure rose to 118/80, but in about 20 minutes, around 3 p.m., she was again found to be in shock with no blood pressure and a rapid weak pulse. Another unit of blood was administered, and an obstetrician was asked to see the patient. He was unable to leave a patient at another hospital, but suggested over the phone that no more blood be given as he thought that the ten units already administered should be enough. He suggested that intravenous Cortisone and vasopressors be continued. Blood pressure remained below 100 throughout the night and because of restlessness, 50 mg. of Demerol was administered twice during the night. The consultant finally arrived some time after midnight but felt that nothing more could be done. The patient remained in shock and expired at 6 a.m., a little over 24 hours after delivery.

When this case was reviewed, the following evaluations were made:

I. Adequacy of data. The data obtained in this case were rated as 4 on the scale of one minimal to 5 maximum, as the data sheet was well filled out and there was a detailed explanatory note, but no autopsy.

II. Cause of death. As classified in the "Guide for Maternal Death Studies," this was considered to be a direct obstetrical death due to hemorrhage, due to a traumatic rupture of the uterus.

III. Avoidability. It was felt that this death was avoidable assuming that the physician possessed all knowledge currently available and that he was working in a well equipped hospital with an adequate blood bank.

IV. Factors of avoidability. In avoidable deaths the Committee attempts to assign factors of avoidability to the physician, the hospital, the patient, or a combination of these. It was felt that the avoidable factors probably should be assigned to the physician and the way in which the transverse presentation was managed. The version was done under Pentothal anesthesia, rather than deep ether anesthesia. There was a question of whether or not the patient was followed adequately prior to the symptoms of shock which were noted two hours after delivery and then there was a three and one-half hour delay before opening the abdomen. Also, at surgery, a supracervical hysterectomy was done rather than a total hysterectomy. There was some criticism, also, about the use of vasopressors at the very onset of the shock rather than immediately starting plasma, blood expanders, or blood.

DISCUSSION OF THE CASE

The physician obtained a flat plate of the abdomen prior to delivery. With a transverse presentation in labor with a closed cervix, delivery by cesarean section would be the procedure of choice. As the cord prolapsed and the cervix was almost completely dilated, evidently he felt that the only way to get a live baby was by version and extraction. In this particular case, Sodium Pentothal was used intravenously for anesthesia. Whenever a version and extraction is done, the patient

should be deeply anesthetized and about the only way that this can be accomplished is with deep ether anesthesia. With intravenous Sodium Pentothal there is not enough relaxation of the uterus, so that in doing a version it is easy to rupture the uterus.

The first signs of shock were picked up approximately an hour and a half to two hours after delivery, and possibly if the patient had been carefully checked, it then might have been found earlier, and blood could have been obtained and started earlier. It was also felt that it is better to use plasma or blood, rather than vasopressors if the cause of the shock is due to blood loss.

There was approximately a six-hour lag between time of delivery and surgery, with three-and-a-half hours used for expectant treatment. Whenever a patient is in shock, bleeding rather profusely, and the vaginal bleeding cannot be controlled, or the uterus will not contract well, it is best to do an immediate hysterectomy rather than wait this long. It has also been found that where there is a lower uterine segment tear, a supracervical hysterectomy will rarely control the bleeding. It is essential that the whole uterus, including the cervix, be removed or the cervix will continue to bleed. It was felt that if a total hysterectomy had been done, probably the patient would not have gone into shock after surgery. Also if the abdomen was closed, with the patient in shock, there is a possibility that some bleeding areas which were not controlled, bled as the blood pressure rose after the abdomen was closed. This patient remained in shock following surgery, and again it was felt that probably the abdomen should have been reopened and the cervix removed or the hypogastric arteries ligated.

While there was no mention of symptoms or signs of a coagulation defect of the blood, we feel that it is a good policy to routinely check for this in patients with bleeding problems such as presented here.

SUMMARY

A maternal death due to hemorrhage following uterine rupture is reported. The rupture followed a version and extraction under Pentothal anesthesia. The patient was in shock approximately three and one-half hours before the abdomen was opened. A supracervical hysterectomy was performed and evidently the patient continued to have intra-abdominal bleeding, though no autopsy was obtained. Postpartal bleeding is a serious and frightening condition, and when one is unable to control it, a total abdominal hysterectomy should be done rapidly, and the blood volume brought up to normal. If the bleeding cannot be controlled at surgery, the hypogastric arteries should be ligated. Again we feel that hemorrhagic shock should be treated by controlling bleeding, and replacing the blood. ★★★

500-G E. Woodrow Wilson Dr.

APACHE MEDICINE

The OR schedule listed the 8:00 a.m. procedure as "Removal of three-fifths of scalp." When the surgeon arrived, he was confronted by the chief of surgery, the chief of staff, and a nervous, apprehensive hospital administrator. The mystery was soon cleared up, when the surgeon explained that he had scheduled the operation by telephone with a clerk who was new on the job. It was routine: Removal of three cysts of scalp.



The President Speaking

'Honor Due Statesmen'

EVERETT CRAWFORD, M.D.
Tylertown, Mississippi

POLITICS ISN'T a dirty word, nor are the practitioners of this art and science automatically something less than other members of society in ethics, morals, and personal integrity. It is a tragedy of the times that the expressions "politics" and "politician" have come to have unsavory connotations in some usage forms. While there may be some bad people in public office, there is nothing basically wrong with our American system of representative government as contemplated in the Constitution.

When anyone refers to all in public service in uncomplimentary terms, a great disservice and injustice is thereby done to the many good men and women who render dedicated service, often at personal sacrifice. Our Mississippi Congressional delegation is a good case in point. The five Representatives and two Senators must maintain residences, and they have no expense funds with which to carry on certain phases of their work for which there is no remuneration. They are continually exhorted to vote for this or to oppose that. They seem to be expected to command all sources of knowledge, perform almost any legislative miracle, secure almost any favor, and to speak from almost every elector's individual point of view.

In the face of all of this, they are gracious and courteous, patient and understanding, and generous with their time budget beyond belief. They work long hours—a typical day finds the Representative or Senator in his office by the breakfast hour—and more often than not, the lights burn in their offices in the evening as they concentrate on committee work, answer mail, and read bills.

When a member of the Congress does a good job, he merits not merely respect but expressions of appreciation. Let's put a new and proper connotation on the honorable and effective practice of politics by according the honor due statesmen. ★★★

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Volume VI, Number 9

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EDITORIALS

The Wide, One-derful World Of International Health

I

FOREIGN AID is a big, expensive operation, the mention of which generally rankles most American taxpayers. Four successive Presidents of the United States have supported this international welfare program with a fervor difficult to describe. Less known and understood are the health and medical aspects of foreign aid which are caught up in an incredible maze of international agencies, organizations, and bureaus. Nobody really knows just how useful or effective they may or may not be, but there's no debating their insatiable appetites for U. S. dollars.

House of Representatives Document No. 313, U. S. Congress, published last year, leads off with this masterpiece of understatement: "A remarkable number of agencies, organizations, institutions, and individuals in the United States are involved, directly or indirectly, in international programs of technical or financial assistance to the economically underdeveloped countries." In terms more readily appreciated, Uncle Sam shelled out $4.7 billion last year as his share of $8.1 billion given in foreign aid by the so-called DAC countries. This group, the Development Assistance Countries, consists of the nations of Western Europe, Canada, Japan, and the United States.

Within our own government, a substantial number of cabinet and executive agencies are involved in international health activities. Apart from those of the Departments of State, Defense, HEW, Agriculture, Interior, Commerce and Labor, medical programs on a world scale are conducted by the Atomic Energy Commission, National Science Foundation, Peace Corps, Veterans Administration, the Export-Import Bank, and believe it or not, the Smithsonian Institution.

II

The master agencies in international health are cogs in the United Nations machine. The World Health Organization (WHO) is concerned exclusively with health matters, and it operates through governments of UN members. The United Nations Children's Fund (UNICEF), a semi-autonomous extremity, addresses itself to children and youth, but a major share of its budget goes for health projects, about 80 per cent, in fact.

A sort of medical lackey for WHO in this hemisphere is PAHO, the Pan American Health Organization, chiefly a communicable disease control arm. To the west and east, a mysterious outfit called ETAP, the Expanded Technical Assistance Program, implements WHO projects. WHO's nutrition expert upon whom the sun never sets is FAO, the UN Food and Agricultural Organization. State medicine and social welfare are drummed up by ILO, the International Labor Organization, and UNESCO, the United Nations Educational, Scientific, and Cultural Organization.

Of a more specialized nature in international health are UNRWA, the United Nations Relief and Works Agency, and UNEAC, the United Nations Economic Assistance to the Congo. Then there are intriguing, cross-servicing arrangements which, aside from being a little confusing, are quite elaborate. For example, FAO, working under the aegis of UNICEF, receives agricultural products from the Food for Peace agency of our U. S. AID, subsequently distributing them in the UN's World Food Program. The medical supervision comes in through ICNND, the Interdepartmental Committee on Nutrition for National Defense.

The idea, it seems, is that somebody, somewhere, gets a square meal.

III

The three major arms of global medicine, WHO, UNICEF, and PAHO, have 5,000 full time employees working in more than 100 countries. This world-wide force requires an annual budget of $90 million to which the U. S. contributes $40 million. FAO gets about $40 million in U. S. agricultural products, $4 million in shipping services, and $6 million cash annually. UNRWA has a 3,400 member staff, ETAP needs $7 million each year, and UNEAC got $39.4 million from the United States in 1964. In the Americas, PAHO has an operating budget of $17.3 million of which the U. S. puts up 66 per cent.

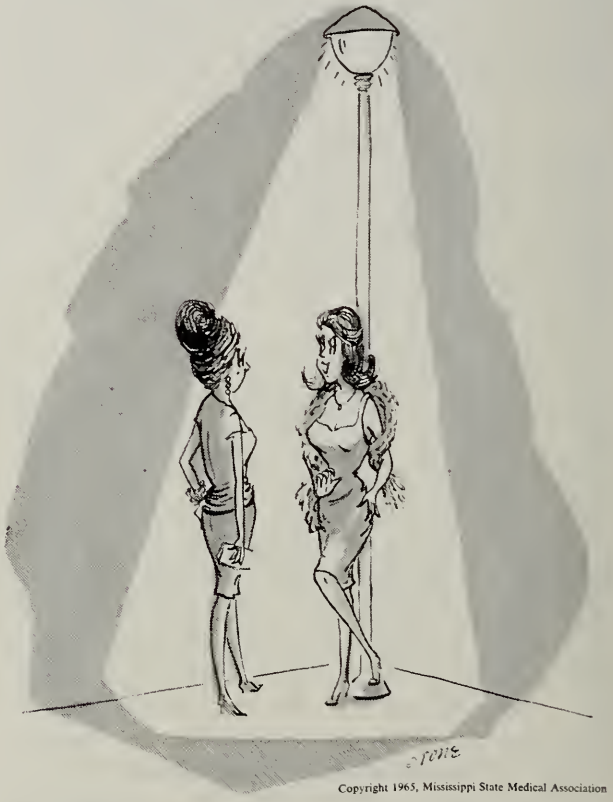
But there's more: It seems as if the various mutual security alliances, generally thought of as military, sponsor international health programs on the premise that medical and socioeconomic security contribute to defense efficiency. NATO gets $1.2 million from the U. S. annually for health and science activities. CENTO, the Central Treaty Organization, conducts seminars in nursing, hospital administration, and preventive medicine. The Colombo Plan Council for Technical Cooperation in South and Southeast Asia conducts training in the health fields; in 1962, the United States contributed 25 per cent of the tab for supporting 25,000 trainees. SEATO, the South East Asia Treaty Organization, supports medical research. WRAIR, that's the Walter Reed Army Institute of Research, has a laboratory in Bangkok, and the National Institutes of Health operate a cholera research unit in Dacca, East Pakistan. The U. S. Public Health Service regularly makes medical research grants to foreign nations.

IV

Of about 2,000 American physicians serving abroad in both hemispheres, the vast majority is not supported by this fantastic amalgam of international organization. On the contrary, about 1,200 are supported by U. S. church and nonsectarian private groups. Protestant denominations sponsor 700 medical missionaries; the Roman Catholic Church, about 50; Care-Medico, 150; charities and foundations, 200; and Project Hope, 35 to 40. The federal government and international organizations, despite enormous outpouring of tax funds, sponsor only about 200 physicians abroad.

Scientific exchange with individual practitioners is conducted by private medicine on an important global scale. The World Medical Association—not to be confused with WHO—is an organization of national medical associations, not of governments. Its scientific interchange program is useful and effective, and it is controlled by medical practitioners, not national and international governmental bodies.

On the other hand, the United States casts only a single vote in the UN maze of international health activities, but it puts up almost half of the money necessary to conduct them and more than half of the scientific knowhow. But tragically, one


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"I met the nicest board of health investigator today."

world medicine seems to make equals of inferiors and superiors. The classic proof is government-sponsored medical care.

Who, for example, would seriously contend that the private Project Hope has not been immensely more valuable in teaching and post-graduate education than a host of the international alphabet organizations? And who can seriously ask why the most advanced nation in the world risks a compromise of scientific quality and economic stability to be the leading party to this massive undertaking? The answer is simple: WHO, that's who.—R.B.K.

Leaving a Body To Medical Science

The American Medical Association believes that there is greater public interest in voluntary donation of bodies after death to medical science that perhaps is realized by physicians and educators. For one thing, the courts which probate wills have observed that there is an increasing tendency for persons to leave their bodies to medical schools for scientific purposes. The state medical association's executive office has received two inquiries in the past three months from individuals interested in doing just this, the first such formal requests of record for this information.

The medicolegal history of the supply and demand for cadavers in teaching is fascinating. In addition to making practical furniture that many still find attractive, early Americans with an eye on a fast continental buck plied the unwholesome trade of "resurrectionism." It was when the demand for cadavers by developing medical schools began to outstrip supply that grave robbing helped establish moonlighting as a second source of income. Just before the War Between the States, various legislatures enacted anatomy laws providing that unclaimed bodies should, under stated circumstances, go to medical schools. Pretty soon, grave robbing became as unprofitable as it was disreputable.

Today, a century later, a shortage of cadavers for teaching purposes has again evolved, although, happily enough, there is no threat that resurrectionism will be resurrected. Some factors contributing to this shortage, AMA says in a medicolegal study, are Social Security death benefits, charitable organization programs for interring the destitute, union burial benefits, the proliferation of life insurance, inexpensive funeral insurance, and lax enforcement of the anatomy laws.

Common law does not recognize a dead human body as property to be disposed of as merchandise. Of course, the surviving spouse or next of kin do have the right to possession of a body for burying. It has further been held in the courts that a dead body is not an asset of the estate of the deceased, so no administrator or executor may properly make disposition of it contrary to the wishes of the lawful next of kin.

The right of a person to provide by will for the disposition of his body after death is generally recognized, but since it is not clear whether this right extends much beyond designating the type and place of burial, agreement among surviving heirs is perhaps the best practical solution. To overcome these legal doubts, 26 states have enacted laws relating to the donation of dead bodies to medical science.

The legal authorities advise those wishing to donate their bodies to medical schools to make an appropriate provision in their will, to execute a separate legal instrument clearing indicating this desire, to name the medical institution to which the body is to be given, and having taken these steps, to trust the ones they will leave behind.—R.B.K.

Hocus Pokus Quackery

A woman, deeply concerned because of her chainsmoking habit, consulted a "doctor of hypnosis," and the quack went to work on her. She stopped smoking but became a compulsive eater and gained 40 pounds. Sadder but not wiser, she sought out still another "hypnotic practitioner." He cured the overeating problem, but the patient became an alcoholic. Finally, she was placed in competent psychiatric hands, probably saving her from eventual drug addiction or even suicide.

The case is not a fanciful preachment against the real enough evils of this vicious form of quackery: It is an actual case reported by the American Medical Association in a new health education pamphlet.

Since 1959, the Mississippi State Medical Association has maintained a positive policy position on the medical and dental use of hypnosis, recognizing that it has a proper place in the medical armamentarium when utilized by those qualified. Use of hypnosis for entertainment purposes is vigorously condemned. Since certain aspects of hypnosis remain unknown, the policy encourages physicians to secure instruction in its technique only from reputable medical sources and to support research. All concerned are warned to de-

velop an awareness of the complex nature of the phenomena involved.

In explaining the usefulness of hypnosis in the hands of those qualified and warning of the grave danger as a fearful plaything, AMA performs a signal service in its program of continuing health education.—R.B.K.

PERSONALS

John K. Abide has opened his practice limited to obstetrics and gynecology in Cleveland.

Thomas J. Anderson has joined the Medical Center in Laurel.

Julius Bosco of Pascagoula has been certified by the American Board of Obstetrics and Gynecology.

John Wood Boyd has opened his office in McComb. He is a graduate of the University of Mississippi School of Medicine and has spent the last four years as a physician in the U. S. Air Force.

Charles E. Catchings of Woodville was honored by the Illinois Central Railroad for 40 years of service with the Main Line of Mid-America. Dr. Catchings received a special pass good for lifetime travel on the ICRR.

T. Y. Fleming of Greenwood has announced the association of Gene E. Crick.

Cecil S. Franks of Tupelo has announced the association of John L. Davis, Jr.

Roy F. Harmon, Jr. has joined the staff of the Houston Hospital and is associated with Dyer Clinic.

Whit B. Johnson, Jr. of Clarksdale has been named president of the Coahoma County Chapter of the Ole Miss Alumni Association.

Esther M. Lackey has announced the opening of her office in Hattiesburg for the general practice of medicine.

James N. Lockard, William J. Weatherford, and Leo O. Stewart of Pascagoula have announced the association of James B. Davis and C. Don Wigham.

J. P. McLaurin, Jr., of Oxford has announced the association of William H. Henderson in the practice of obstetrics and gynecology.

James Burke Martin has opened his office in association with James W. Pressler in McComb. Dr. Martin was graduated from the University of Mississippi School of Medicine and interned at the John Peter Smith Hospital in Fort Worth, Texas.

Frank J. Morgan has resigned as director of health services of the Forrest County Health Department to rejoin the staff of the Street Clinic and Mercy Hospital in the Department of Surgery. Dr. Morgan received his M.D. from the Tulane University School of Medicine and interned at Charity Hospital in New Orleans. He took his residency at Mercy Hospital-Street Memorial and the University Medical Center.

L. B. Morris has announced the association of Glen Pugh in the Morris Clinic in Macon. Dr. Pugh received his medical degree from the University of Mississippi School of Medicine and interned at the University Medical Center.

Ray F. Motley has joined the Jones County Community Hospital as pathologist and director of the laboratory. A native of Oklahoma, Dr. Motley holds a medical degree from the University of Oklahoma School of Medicine. He is a member of the American College of Pathologists, and the American Society of Clinical Pathologists.

A. F. Moss has been named president of the Ellisville Rotary Club.

John O'Keefe has closed his practice in Biloxi in order to begin a residency in orthopedic surgery at Charity Hospital in New Orleans.

B. B. O'Mara of Biloxi has reopened his office for the practice of pediatrics and internal medicine.

Jack H. Phillips of Natchez has announced the association of Jack Carl Passman in the practice of bone and joint surgery.

Wendell H. Stockton of Amory has announced the association of William M. Hilbun, Jr. for the practice of pediatrics at the Physicians and Surgeons Clinic.

Thomas E. Waller of Starkville has been appointed County Health Officer by the Oktibbeha Board of Supervisors.

Book Review

Tracy's The Doctor as a Witness. 2nd edition. By William J. Curran, LL.M., S.M. Hyg. 196 pages. Philadelphia: W. B. Saunders Company, 1965. $5.75.

With the ever increasing involvement of the courts in our heretofore rather private world of medicine, the physician finds himself compelled to share his medical knowledge and opinion before bodies made up of other than medical colleagues. The relationship of the legal process to the practice of medicine is becoming more complex and constant, and it behooves every physician to be thoroughly acquainted with his responsibilities to his patient and to his society when called upon as a witness in legal proceedings. This volume, *The Doctor as a Witness,* goes into great detail explaining the meanings of certain legal terms, predominantly the definition of the adversary process, an involvement purely legal in nature which physicians had no real contact with before and which is quite different from the usual medical contacts with its necessary limitation of dogmatism. Meanings of law, preliminary investigation before magistrates, grand jury investigation, trials in open courts, Workmen's Compensation hearings and all capacities in which a physician may be called upon to testify are gone into in detail in the first chapter of this very compact and concise volume.

This book emphasizes the value of preparation for trial and develops minutely the elements of preparation with emphasis placed upon good clinical records. The limitation of the physician's information as an expert, the value and definition of reasonable probability and probably most important of all, the differences between legal cause and medical cause is explained. With thorough attention to the information given in Chapters 6, 7 and 8 of this volume, the physician can feel thoroughly prepared during direct examination by his own attorney and by the opponent's attorney. He can learn to handle himself well, learn to live within the bounds of truth and reason with his questions without compromising his client's case and, most of all, can derive from this process, a new sense of perspective concerning his profession and its relationship in *all* spheres to his patient, in the process probably being a bit humbled by the fact that he is not considered a sacrosanct and privileged pundit.

I do recommend this volume thoroughly; it, with the attached index and bibliography, can insure the physician's preparation for almost any type medico-legal involvement.

JOSEPH P. MELVIN, M.D.

Books Received

JOURNAL MSMA has received the following books for review. Selections will be made for more extensive reviews in the interest of readers and as space permits. Further information on the books listed will be furnished on request. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

External Otitis: Diagnosis and Treatment. By Edley H. Jones, M.D. 245 pages with illustrations. Springfield: Charles C Thomas, 1965. $9.50.

Physical Examination of the Joints. By William P. Beetham, Jr., M.D.; Howard F. Polley, M.D.; Charles H. Slocumb, M.D., and Walt F. Weaver, M.D. With 15 anatomic drawings by Russell L. Drake. 198 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $7.50.

Hallux Valgus, Allied Deformities of the Forefoot and Metatarsalgia. By H. Kelikian, M.D. 503 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $19.50.

Obstetrics. From the Original Text of Joseph B. DeLee, M.D. By J. P. Greenhill, M.D. ed. 13. 1296 illustrations on 1193 figures, 54 in color. 1246 pages. Philadelphia: W. B. Saunders Company, 1965. $20.00.

Surgery in America from the Colonial Era to the Twentieth Century. Selected Writings. Edited by A. Scott Earle, M.D. 280 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $8.50.

Electrocardiography and Vectorcardiography: Instrumentation, Fundamentals, and Clinical Applications. By Lawrence E. Lamb, M.D. 609

pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $17.00.

Ophthalmology: Principles and Concepts. By Frank W. Newell, M.D., Professor and Head, Section of Ophthalmology, The University of Chicago. 491 pages with 172 illustrations. St. Louis: The C. V. Mosby Company, 1965. $12.25.

Applied Hypnosis and Positive Suggestion in Medicine, Dentistry, and Patient Care. By George A. Ulett, M.D., Professor and Chairman, Department of Psychiatry at the Missouri Institute of Psychiatry, University of Missouri School of Medicine, and Donald B. Peterson, M.D., Superintendent, Fulton State Hospital, Fulton, Missouri. 134 pages. St. Louis: The C. V. Mosby Company, 1965. $8.50.

The Management of Fractures and Soft Tissue Injuries. ed. 2. By the Committee on Trauma, American College of Surgeons. Based on *An Outline of the Treatment of Fractures,* ed. 8, and *Early Care of Acute Soft Tissue Injuries,* ed. 3. 365 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $7.50.

Anatomy and Surgical Technique of Groin Dissection. By John S. Spratt, Jr., M.D., Chief Surgeon and Chief of Staff, Ellis Fischel State Cancer Hospital; William Shieber, M.D., Chief, Division of Vascular Surgery, Jewish Hospital of St. Louis, and Burl Mayes Dillard, M.D., Director, Tumor Clinic, St. Louis City Hospital. 97 pages with illustrations. St. Louis: The C. V. Mosby Company, 1965. $9.75.

AMA Sets Congress On Ethics

The American Medical Association will sponsor a National Congress on Medical Ethics and Professionalism at the Drake Hotel in Chicago, Oct. 2-3.

The conference, first-such meeting sponsored by AMA, will provide an opportunity for members of the profession to exchange ideas on ways to emphasize the concern of all physicians with the high standards of conduct traditionally associated with medicine.

Among the meeting highlights will be an address by Dr. James Z. Appel, AMA president, on the subject "Medicine, a Profession or a Business?"

Another speaker will be Dr. Walter H. Judd, former U. S. congressman and currently a member of AMA's Judicial Council, who will discuss the accomplishments and deficiencies in the medical profession's standards for ethical deportment at a Saturday luncheon.

Other speakers will discuss such subjects as "Professionalism, a Trust in Perpetuity," "When Ethics and Welfare Programs Clash," "What Is Your Ethical I.Q.?" and "Can Ethics Be out of Tune With the Times?"

Saturday's afternoon sessions will consist of workshops on grievances and medical disciplinary procedures. The workshop format will permit each registrant to join a small group for a more effective exchange of information on procedural techniques and experiences. Workshop subjects include:

—Appeals to State Ethics Boards and to the AMA Judicial Council
—Medicine and the Law
—Medicine and Pharmacy
—Interpretation of Unethical Conduct by Local Standards

Advance registration forms and additional information about the conference may be obtained by writing Dr. James H. Berge, chairman, Judicial Council, American Medical Association, 535 North Dearborn, Chicago, Ill. 60610.

UMC Plans Genetics Workshop

The University Medical Center's first Workshop in Medical Genetics is to be held Wednesday, Sept. 8, under the auspices of the Departments of Preventive Medicine and Pathology and the Postgraduate Education Committee.

Lecturers for the one-day program are to be Dr. Wayne Finley and Dr. Sara Finley, both of the Medical College of Alabama; Dr. Charlton Mabry of the University of Kentucky; Dr. Robert Thompson, and Dr. John Jackson, both UMC faculty members. Dr. Jackson is program coordinator.

Also on the early fall postgraduate schedule are a Seminar on Critical Abdominal Emergencies to be held Oct. 15 and the annual refresher for nurse anesthetists on Oct. 8. Circuit Courses will resume in October, going first to Tupelo and Greenwood. Added at the request of physicians there, Columbus will make the eighth circuit host during the 1965-1966 year. Others are Laurel, Meridian, Natchez, Hattiesburg, and Biloxi.

State Medical and Hospital Associations Present Second Blood Banking Seminar

Mississippi physicians and hospitals joined forces through their respective professional associations to present the second joint Seminar on Blood and Blood Banking at Jackson on Aug. 12.

The meeting presented comprehensive information on administrative and technical aspects of this vital health service. Approximately 72 physicians, hospital administrators, directors of nursing, and laboratory technicians attended the day long meeting.



Participants in the Aug. 12 Seminar on Blood and Blood Banking check over a folder. From the left are Richard Dice, Dr. Catherine Goetz, Chandler Clover, Carolyn Slater, and Dr. Everett H. Crawford.

Keynoting the seminar was Dr. Everett Crawford of Tylertown, MSMA president. Dr. Crawford told the audience, "Modern medicine has a very literal interest in and concern over blood: As the first living tissue to be successfully transplanted from one human being to another, as a rich source of diagnostic information, and as a physiologic phenomenon in the process of life.

"So vast is our growing fund of scientific knowledge about blood that a medical subspecialty has grown up around it. So important has it become in the area of medical socioeconomics that we debate policy to apply to it. So significant is blood before our courts of justice that a system of jurisprudence has evolved in its litigation.

"But our first and primary interest in blood and blood banking is . . . to secure and make freely available the widest, most efficient, and economical supply of safe, usable blood and blood derivatives for our patients."

Presenting the legal viewpoint on the seminar was Richard Bergen of Chicago, member of the American Medical Association law department. Mr. Bergen discussed the Kansas City Case, which was argued before the Federal Trade Commission last December and is expected to have a profound effect on the future of blood banking in this country. On July 5, 1962, after an investigation of more than five years, the FTC issued a complaint against a number of corporate and individual respondents charging them with having entered into an agreement or planned course of action to hamper and restrain the sale and distribution of human blood in interstate commerce. It was charged that the respondents conspired to boycott a commercial blood bank in the sale and distribution of blood in commerce, and that the conspiracy was to the injury of the public and unreasonably restricted and restrained interstate commerce in violation of Section 5 of the Federal Trade Commission Act.

Mr. Bergen discussed the pertinent facts and the legal questions involved in the case. He concluded his presentation by recommending that all



Speakers and moderators for the seminar included Dr. Charles B. Mitchell, Dr. L. Ruth Guy, Dorothy C. Smith, Dr. Thomas F. Puckett, and Dr. Kenneth M. Heard.

communities should secure a thorough legal check-up of their local blood banking operations by competent antitrust counsel.

He noted that one reaction to the Kansas City Case has been the introduction in Congress of a bill, S. 1353, which would exempt certain activities of nonprofit blood banks and of physicians and pathologists from the antitrust laws. He said this bill has been referred to the Committee on the Judiciary, but thus far no action has been taken.

Dr. Charles B. Mitchell, Jr., of Meridian, a member of MSMA's committee on Blood and Blood Banking presided over the morning sessions and Dr. Catherine G. Goetz of Jackson, also a committee member, chaired the afternoon segment.

Dr. Kenneth M. Heard of Jackson, chairman of the committee, addressed the seminar on "Single Unit Transfusions." He said, "There are certain very definite medical indications for a single unit transfusion. Methods for determining 'rates of single unit transfusions' are difficult to formulate and each such transfusion should be evaluated on the basis of the findings in the individual case."

Other local speakers for the seminar included Carolyn Slater, chief medical technologist of the Mississippi Baptist Hospital at Jackson, and Dr. Thomas F. Puckett of Hattiesburg, a member of the MSMA committee, who moderated an afternoon panel.

Among the out of state speakers were Dr. L. Ruth Guy of Parkland Memorial Hospital, Dallas; Dorothy C. Smith, R.N., administrator of the Jacksonville, Fla., blood bank, and Richard Dice of Birmingham, executive director of the Community Blood and Plasma Service.

Mississippians Testify Against DeBakey Proposal

Comprehensive testimony opposing the medical center complexes and satellite stations for research, teaching, and care of heart disease, cancer, and stroke, was presented at Washington in behalf of the Mississippi State Medical Association during the recent hearings on H.R. 3140.

Drs. Everett Crawford of Tylertown, president, and William E. Lotterhos of Jackson, chairman of the Council on Legislation, presented a nine page statement on the association's position. Gist of the testimony was that the program was structured on many undocumented assertions, that it offers unrealistic panaceas for real or fancied deficiencies in health care services, that a dominant role in health care services would improperly be assigned to the federally-supported medical complexes, that it would seriously dislocate specialized medical manpower, and that the program would reorganize medical services under centralized federal orientation.

Prior to the hearings, an invitational conference on the report of the President's Commission on Heart Disease, Cancer, and Stroke and the pending legislation was conducted by AMA at Washington. Drs. Crawford and Lotterhos participated, representing the state medical association.

Also testifying against the bill were the AMA and American Academy of General Practice. The measure has already been passed by the Senate and is pending before the House.

AMA Emergency Symbol Gains Wide Use

Almost two years ago American physicians, through the American Medical Association, announced a new universal symbol which tells anyone rendering emergency care to a person who is unconscious or otherwise unable to communicate that its wearer has a special physical condition requiring special attention.

In the intervening two years the symbol has gained world-wide acceptance. It has been widely disseminated throughout the United States and, through the World Medical Association, is now being utilized in many other nations.



The symbol may be displayed on a wristlet, an anklet, a medallion around the neck or elsewhere. It is a sign that there are vital medical facts on a personal health information card in the bearer's purse or wallet or on an alerting device.

The symbol is a hexagon-shaped emblem containing a six-pointed figure, or sign of life. Superimposed on the figure is a staff with a snake entwined about it—the staff of Aesculapius, the insignia of the medical profession.

The symbol is used by many individuals. Diabetic coma, for instance, sometimes makes its vicitms appear intoxicated, and treatment may be dangerously delayed. The symbol also is used to indicate allergies to antibiotics, such as penicillin.

The need for certain medicines must be known. Heart patients taking drugs to prevent blood clots

may bleed profusely if injured unless they receive special care. Epileptics could be saved much trouble and unnecessary hospitalization if they carried a card indicating they may have seizures.

The American Medical Association recommends that everybody have a card, such as the AMA emergency medical identification card, to show who they are, where they live, whom to call if they become ill or injured, the name of their doctor, and when they were immunized, particularly against tetanus, or lockjaw. On this card should be noted any special problems that need immediate attention in an emergency or could cause an emergency.

Some poeple's problems are so serious that it is absolutely essential for the first aider to know about them in an emergency. A durable signal device made of metal or plastic should be worn by such people, preferably about the neck or on the wrist or ankle.

Many organizations and manufacturers sell durable signal devices for emergency medical identification. The names of those reported to the AMA may be obtained by writing to Emergency Identification-AMA, American Medical Association, 535 N. Dearborn St., Chicago, Ill. 60610. The AMA emergency identification card also is available from the same address.

The AMA-listed manufacturers most convenient to Mississippians are Antin's Jewelers, 308 Royal St., New Orleans, La., and Medical Info-Ident, 35 S.W. Goth Ave., Miami, Fla.

Sixteen Join UMC Faculty

Sixteen new faculty members named at the University of Mississippi School of Medicine brought the roster to 107 full-time faculty effective Aug. 1. Appointed in nine departments, the group includes 10 instructors and six assistant professors.

Included are: Surgery, Dr. Lamar Weems, assistant professor (urology), who got his M.D. at Baylor and his specialty training at the University Medical Center and Massachusetts General; Dr. M. D. Turner, associate professor (research), with a Ph.D. from Tennessee, returning to UMC after some months in Texas; Dr. Allen Hollis, instructor, a graduate of Alabama who completed his surgery residency at the Medical Center and has been in private practice in Alabama, and Dr. Carlos Chavez, instructor, a graduate of the University of San Marcos and former UMC fellow and resident.

Medicine: Dr. Armin Haerer, assistant professor (neurology), who graduated and took his internship and residency at the University of Michigan before serving as chief of neurology at Ireland Army Hospital, Fort Knox; Dr. Gordon Deraps, instructor, a University of Texas graduate; UMC alumnus Dr. David Owen, instructor. Pharmacology: Dr. M. R. Myles, assistant professor (research), with a Ph.D. from Iowa State, and Dr. Shoji Shibata, instructor, who earned his M.D. at Nara Medical College, Kyoto.

Others are: Thomas M. Smith, instructor in biochemistry; Dr. Gussie Higgins, returning to the Medical Center as an assistant professor of pediatrics; Dr. Lloyd G. Berrong, instructor in radiology; Dr. J. E. Roberts, assistant professor of psychiatry with an M.D. from Northwestern; Dr. Gary Prim, instructor in anesthesiology, and another UMC alum, Dr. Henry Webb, instructor in obstetrics-gynecology.

Mrs. Sadler Receives Awards for Journal



Mrs. Betty Sadler, editorial assistant, received two first place awards for the JOURNAL OF THE MISSISSIPPI MEDICAL ASSOCIATION *in the 1965 Mississippi Press Women's contest. The* JOURNAL MSMA *awards were in the categories of magazine edited by a woman and picture layout in a magazine. Mrs. Sadler, center, is shown accepting the awards from Mrs. Margaret Phillips of Tunica, president of the Mississippi Press Women, and Ray Furr, head of the MSCW Department of Journalism who served as chairman of the judging panel. This recognition brings the* JOURNAL'S *state and national awards to a total of eight.*

DEATHS

MITCHUM, WILLIAM RANSOME, JR., Meridian. M.D., Medical College of Georgia, Augusta, 1943; interned U. S. Marine Hospital, New Orleans, La., one year; residencies, Battey State Hospital, Rome, Ga., and Nichols General Hospital, Louisville, Ky.; captain, U. S. Army; died July 9, 1965, age 46.

WOODWARD, JAMES IRA, Picayune. M.D., Tulane University School of Medicine, New Orleans, La., 1908; member of the Southern Medical Association and the Southern Railway Surgeon's Association; Emeritus member of MSMA and member of the Fifty Year Club; died July 12, 1965, aged 84.

NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

CHERNELL, EUGENE, Jackson. Born New York City, N. Y., Dec. 13, 1933; M.D., New York University, 1959; interned Jewish Hospital of Brooklyn, N. Y., one year; psychiatry residency, Cincinnati General Hospital, Ohio, two years; psychiatry fellowship, Cincinnati General Hospital, Ohio, one year; member, Mississippi Psychiatric Association and the American Psychiatric Association; elected May 4, 1965, by Central Medical Society.

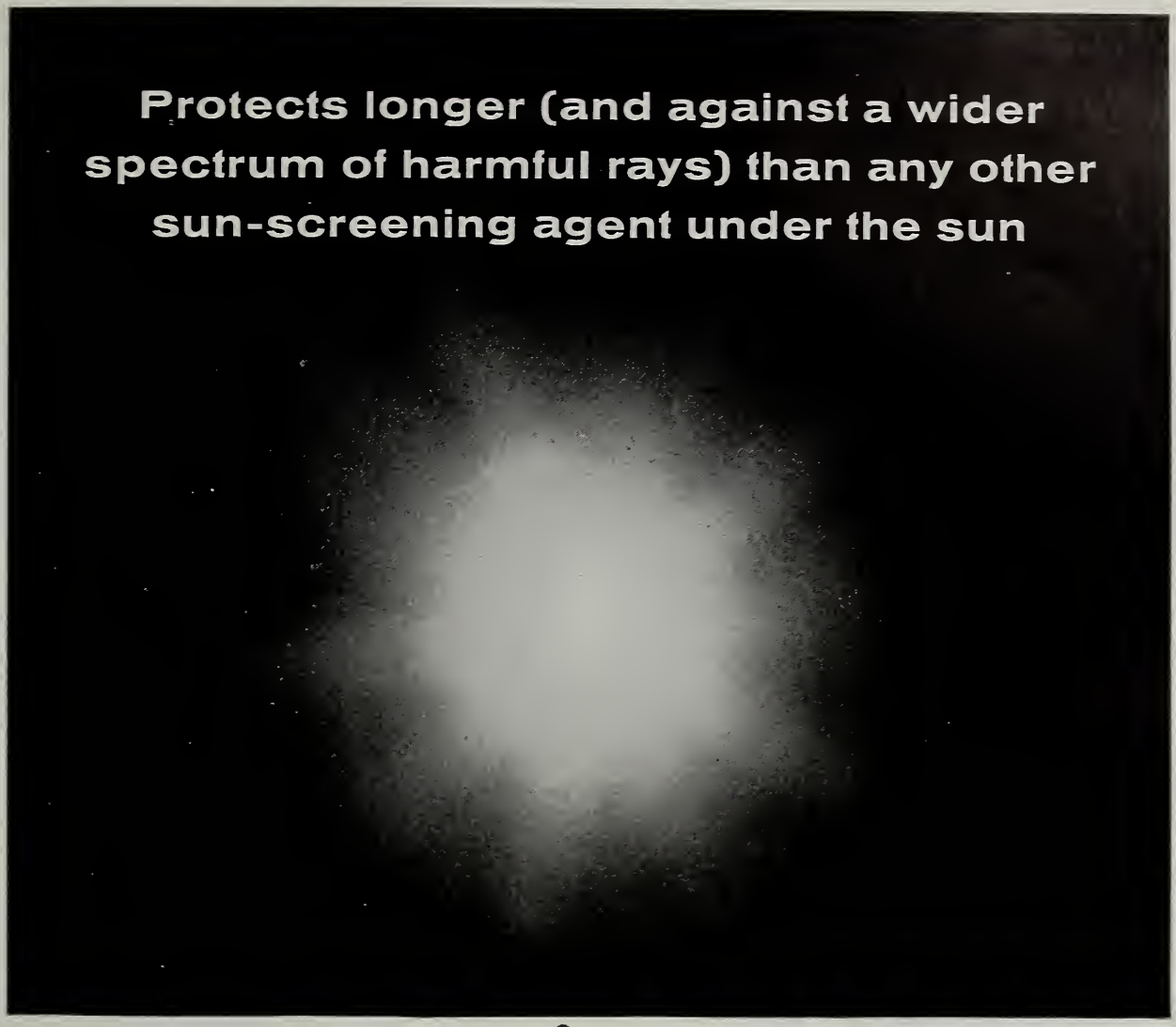
LACKEY, ESTHER MCGINNESS, Hattiesburg. Born Evansville, Ind., April 16, 1922; M.D., Indiana University School of Medicine, Indianapolis, 1946; interned Philadelphia General Hospital, Penn.; elected June 10, 1965, by South Mississippi Medical Society.

PRIM, GARY JOSEPH, Jackson. Born Harriman, Tenn., July 9, 1937; M.D., University of Tennessee College of Medicine, Memphis, 1961; interned Mobile General Hospital, Ala., one year; anesthesiology residency, University of Mississippi School of Medicine, Jackson, two years; member, Mississippi Society of Anesthesiology and the American Society of Anesthesiology; elected July 6, 1965, by Central Medical Society.

State Morbidity Reported Through July 30

The Mississippi State Board of Health reports the following occurrence of morbidity for 1965 through the 31st week of the year, ending July 30, 1965. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul.	801
Tuberculosis, O.F.	26
Typhoid fever	4
Encephalitis, infectious	15
Toxoplasmosis	1
Septicemia, Staph.	7
Dysentery	
Bacillary	25
Amoebic	1
Dysentery, NOS	9
Leptospirosis	1
Meningococcal infections	26
Diphtheria	1
Mononucleosis, infectious	34
Hepatitis, infectious	174
Hepatitis, serum	1
Tetanus	2
Helminthic infections	
Hookworm	661
Ascariasis	231
Strongyloides	40
Meningitis, O.F.	24
Histoplasmosis	10
Other Cestode Infestations	6
Salmonella Inf.	16
Gastro-enteritis	2
Streptococcus infections	
Scarlet fever	29
Strep throat	1,244
Pertussis	12
Measles	1,416
Chickenpox	252
Mumps	326
Vaccinia, smallpox	1
Influenza	5,891
Gonorrhea	2,794
Syphilis	
Early	412
Late	65



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Research Bridge To Link VA and Alabama Center

A symbolic ground breaking for $2.8 million in construction at the University of Alabama Medical Center took place recently with Senator Lister Hill as keynote speaker.

The ceremony was for two buildings. One will mark the first time a Veterans Administration Hospital has ever been connected physically with a teaching hospital by an actual link between buildings with construction of the $1.2 million VA Research Bridge. The other will be a $1.4 million addition to the Health Sciences Research Building of the Medical Center, thereby increasing the present area almost 50 per cent.

Senator John Sparkman and Congressman John H. Buchanan, Jr. were on hand along with a group of top VA officials from Washington, Atlanta, Montgomery and Nashville, plus city, state and county officials.

Although the VA Hospital has been associated with the University Medical Center for many years in a residency training affiliation, interchange of teaching staffs and collaboration on many research projects, the facilities of the two institutions have always been physically separated from each other. The new structure will greatly increase and facilitate their interchange of health services.

The VA addition will connect the second, third, fourth and fifth floors of the 10 story VA Hospital to the third through sixth floors of the University's seven story research building. It will pass over 19th Street South, one of Birmingham's busiest streets.

Point of connection between the two buildings will involve part of the existing Medical Center research building and part of the new addition to the building soon to be constructed.

The "research" bridge will be windowless to allow for construction of more working areas, and will have a total area of 30,600 square feet, with 20,000 square feet of laboratory space. A central water system will pipe distilled water to each floor, rather than having separate distilling facilities in each laboratory. Two mechanical rooms on the first floor and two on the roof will allow an uninterrupted flow of laboratories. The building will be made of reinforced concrete and will harmonize with the outside of the University research area.

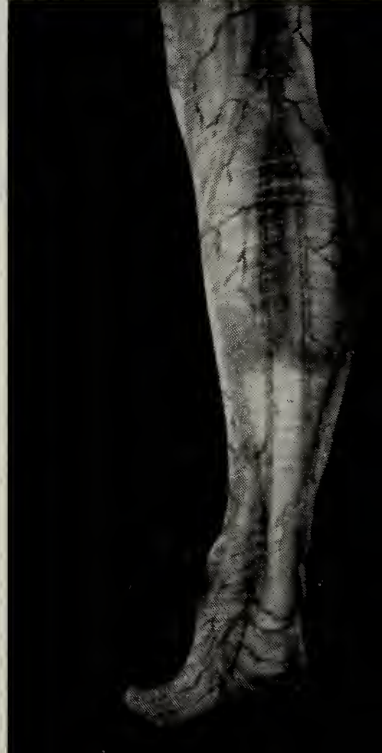
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by matching funds from the National Institutes of Health, division of Research Facilities and Resources, and the University of Alabama, whereas, the "research bridge" is being paid for with government funds only.

AAMA Plans Educational Seminar

The annual meeting of the American Association of Medical Assistants will convene Oct. 13-17 in New York. Phases of office management will be discussed during the two-day educational seminar planned for the meeting at the Roosevelt Hotel.

In addition to the symposium on office management, the assistants will also hear talks on: "The Patient—The Office VIP"; medical quackery, and "Medical Who-dun-its." The latter will be presented by Dr. Milton Helpern, chief medical examiner, New York City.

The House of Delegates, AAMA's policy-making body, will convene Wednesday, Oct. 13, and continue through Thursday, Oct. 14. Friday and Saturday are devoted to the educational programs, with association workshops highlighting the Saturday proceedings. Featured workshop topics will be parliamentary procedure, certification, membership, leadership, public relations, and treasurers.

Prior to the formal opening of the meeting, special tours and events have been arranged for the medical assistants. Monday, Oct. 11 is "Medical Assistants Day at the World's Fair," with a VIP tour of the GE "Futurama," a visit to the Atomedic Hospital, and brunch at the Top of the Fair. Special admission to other exhibits has been arranged.

During a visit to the UN on Tuesday, Oct. 12, AAMA delegates will hear a special message from a member of the World Health Organization. A tour of Rockefeller Center, featuring a Fiesta Brunch at La Fonda del Sol, highlights Wednesday morning.

On Friday, Oct. 15, AMA President James Z. Appel, Lancaster, Pa., will be the guest speaker at a luncheon honoring AAMA past presidents. The Awards luncheon Saturday will honor those medical assistants who have become certified, as well as state chapters which have been judged outstanding in the areas of membership and publications. Scholarship fund certificates will also be presented.

Climaxing the week's events will be the Saturday banquet honoring state chapter presidents. Mrs. Kitty Kennedy of Jackson is president of the Mississippi Chapter.



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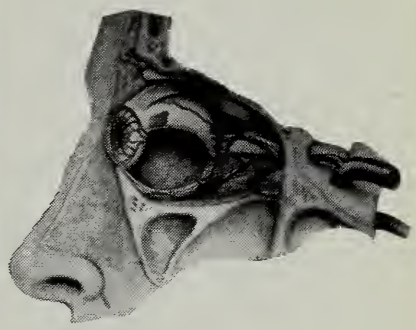
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Arthritis Symposium Set for New Orleans

A Postgraduate Symposium on Arthritis and Related Diseases will be held Nov. 15 and 16, 1965, in the Tulane Medical School Auditorium, New Orleans.

Sponsors are The Arthritis Foundation, Louisiana State University School of Medicine, Tulane University Medical School.

Program and registration arrangements will be available from the Louisiana Chapter, Arthritis Foundation, 531 Godchaux Building, New Orleans, La. 70130.

Michigan Society To Celebrate Centennial

The Michigan State Medical Society will celebrate a century of service in medicine at its Centennial Session in Detroit, Sept. 19-24, with headquarters at the Sheraton Cadillac Hotel.

"Daily themes have been developed and each day will be a convention in itself, replete with scientific, professional and social events," said Dr. Oliver B. McGillicuddy of Lansing, president of the Michigan Society.

"The special days will pay tribute to the great segments of American society which complement and support the work of Michigan doctors of medicine," explained President McGillicuddy. "We want to recognize that today's medical care is the work of many hands, many minds, and many hearts."

The six-day plan includes programs on medicine and religion; medicine and business, industry, and communications; medicine and medical organization; medicine and science; medicine and voluntary health, and medicine and government.

Speakers for the six-day meeting will include Dr. William Menninger, president of the Menninger Foundation, Topeka, Kansas; the Rev. Dr. Paul McCleave, director of the AMA Department of Medicine and Religion; Dr. Walter Judd, former congressman from Minnesota; Dr. Austin Smith, executive director of the Pharmaceutical Manufacturers Association, Congressman Durward Hall, M.D., and Windham Davies, M.D., M.P., of England.

During the the centennial meeting the House of Delegates will act to recharter all the 55 Michigan component medical societies, with local ceremonies to be conducted during the 1965-66 centennial year.

Indications: Many types of edema involving retention of salt and water.
Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.
Precautions: Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.
Side Effects: Agranulocytosis, constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, impotence, leukopenia, muscle cramps, nausea, postural hypotension, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.
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NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION
JACKSON, MISSISSIPPI

October 1965

Dear Doctor:

Project Vietnam, a new people-to-people voluntary medical care program, is helping South Vietnam to secure much needed physicians' services. Teams of 20 doctors are being recruited voluntarily in U.S. for 60 day tours in American-sponsored hospitals to care for civilian population in beleaguered country.

> AMA and state medical associations have been asked to assist in recruitment of GP's, surgeons, and orthopaedists. Program pays volunteer physicians' air fare, housing, meals, and per diem. Details from Project Vietnam, 2233 Wisconsin Ave. N.W., Washington, D.C.

Many Mississippi local medical societies and hospital staff groups will be tooling up for 1965 Diabetes Detection Week set for November 14-20. Diabetes Association is already distributing program kits to professional groups - all free from ADA, 18 E. 48 St., New York.

They call it a population explosion for good medical reasons, even though the world's present growth rate is a scant 2 per cent annually. Had the present rate held steady for the past 1,965 years, the earth's population would theoretically be 70 quadrillion or 100 people for every square foot on the globe.

"MD's Wife," newest publication on the medical scene, is making its debut under the aegis of the Woman's Auxiliary to AMA. The four color magazine will be published bimonthly, carry national advertising, and feature articles of interest to women. It replaces the old quarterly Auxiliary Bulletin and has an initial circulation of 90,000 nationally.

Hospital utilization committees, a requirement of the new Medicare program, will be discussed at the 1965 AMA Medical Services Conference. The meet is scheduled to precede the Philadelphia Clinical Convention on November 27. AMA says that the conference will bring together authorities from medicine, hospital administration, and other health agencies to explore the purpose, philosophy, and modes of operation of utilization committees in hospitals.

Sincerely,

Rowland B. Kennedy
Executive Secretary

DATELINE - MEDICAL AMERICA

Sharp Increase Is Called For In Doctor Draft

Washington - The Selective Service issued calls last week for 2,000 physicians and dentists under the revitalized doctor draft program. The sharp increase results from armed services expansion. Total callup for last quarter of 1965 is roughly equal to more than 30 per cent of all medical school graduating classes for the year. New deferment criteria, already effective, are much tougher than previously.

New Drug Warning Is Issued To Athletes

Chicago - AMA's Committee on Medical Aspects of Sports is warning athletes and coaches that two types of drugs, said to be creeping into usage in sports, are dangerous. They are DMSO (dimethylsulfoxide), the highly touted analgesic which is still undergoing clinical investigation, and the androgenic steriods, sometimes given with hope of weight gain.

Dimunition Is Noted In Geographic Longevity Gap

New York - Actuarial researchers of the Metropolitan Life Insurance Co. report that human lifespan increased in every geographic area of the United States in the decade of the 1950's, but the pattern of increases was such that geographic variations in longevity have diminished. Most Americans picked up one to two years additional life expectancy from birth during past 10 years, and differences for geographic areas vary now only 67.1 to 67.7 years. Five years ago, Journal MSMA made same observation based on changing mortality trends.

Court Rules Soldier Can't Sue Army Doctor

Los Angeles - A U.S. Circuit Court of Appeals held that a soldier can't seek damages for malpractice from an armed services physician for allegedly leaving sutures in the kidney area, making a second operation necessary. Edict said that even though Army Medical Corps performs mainly a service function, it also exercises a command function over patients. Court also ruled that Congress has provided for service-connected injuries. Case in point is Bailey v. Van Buskirk, 345 F. 2d 398 (C.A. 9, April 26, 1965).

Medicare Is Bonanza For Hospital Suppliers

Chicago - The Wall Street Journal reports that Medicare will give the economically healthy hospital supply industry a big boost, upping sales as much as 10 per cent next year. Of the $6.5 billion going into Medicare each year, about $1.5 billion will go to hospital suppliers. American Hospital Supply Corp. and McKesson and Robbins look for increases in annual admissions of over-65 patients to 5 million from present 2.8 million.

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ORIGINAL PAPERS

The Credibility of Parapsychology

JAMES L. ROYALS, M.D.
Jackson, Mississippi

From the dialogue between parapsychology's protagonist and the skeptic comes a distillation of fact which serves the truth. The author, who is chairman of the association's Council on Scientific Assembly, organized the Symposium on Parapsychology presented at the 1965 annual session, and he offers rational bases of credibility for physicians' seriously considering the medical implications in this emerging scientific field.

Adapted from the keynote address before the symposium, the paper outlines the initiation of the widely known Rhine investigations at Duke University and their progress over more than 30 years. The generation-long study, the author concludes, is too substantial to be ignored, too credible to be summarily dismissed, and too suggestive of new vistas of understanding to be excluded from medicine's sphere of interest.

THE BODY OF KNOWLEDGE and apparent psychic phenomena which are identified as parapsychology are admittedly controversial. If they were not, however, the Council on Scientific Assembly of the Mississippi State Medical Association would have had little interest in the organization and presentation of a Symposium on Parapsychology at the 97th Annual Session.

In an effort to construct a medical perspective extending toward this intriguing area of study, rational bases of credibility through which the perspective may pass are needed. It is obviously prudent to reserve to the authorities the discussion of the content of parapsychology, but it is reasonable to list some of the things it is not. For many of us, be we physician, physical scientist, academician, or layman, any mention of psychic phenomena immediately suggests theatrics. Unfortunately, this is a conventional and legitimate reaction, because the ubiquitous night club mind reader, the carnival clairvoyant, and the palmist at the outskirts of the city are much more familiar than the serious investigator who labors in the vineyard of truth.

Now it is not to be denied that there are responsible skeptics who do not accept present findings in parapsychology. Rather than write off such findings summarily, it is appropriate to recall that some physicians rejected out of hand Goldberger's postulating that pellagra was caused by a dietary deficiency. Fleming's *penicillium notatum* collected dust on the laboratory shelves, because nobody conceived it to be of any value. Halstead was regarded in polite medical company as that odd fellow who wore rubber gloves during surgery and thought it practical to perform a thyroidectomy.

Skepticism, then, is a healthy thing both for the protagonist and the reactive antagonist. From this dialogue comes a distillation of fact which serves the truth.

Chairman, Council on Scientific Assembly, Mississippi State Medical Association.
Read before the Symposium on Parapsychology, 97th Annual Session, May 10-13, 1965, Biloxi.

There's an anecdote in point: The struggling young investigator received only scorn and contempt from his colleagues as he worked to sift fact from fallacy. At first they said to him, "It can't possibly be true." As he progressed in his investigations, the critics observed that "It could be true, but it's unimportant." When the researcher proved for all the validity of his labors, they promptly retorted that "It is quite true and important, but it's totally useless." Such is the extreme of skepticism which serves none and demeans all.

BARRIER BREAKING

Medicine offers almost endless examples of barrier breaking in the extension of its frontiers of knowledge. Our physician-grandfathers could not possibly understand today's unbelievable progress in drug therapy and the forward thrust in surgery. The same is true of physics, because the few who understood Albert Einstein hardly grasped that his mass-energy theories meant unleashing the power of the universe which was bound up in the atom. Few aeronautical engineers had ever heard of Newton's Third Law of Motion a generation ago, but the jet engine spans the face of the earth with monotonous regularity today. Yet, a subtle change is taking place, for almost nobody today doubts that an astronaut will walk on the moon within a decade.

All of this is to say that the incredible boundaries of the unusual and near-impossible are really but the entrances into new eras of achievement. So who is to say that voluntary, controlled psychic phenomena is either unlikely or impossibly beyond man's attainment?

About 1930, J. B. Rhine, curious about scraps and fragments of meager evidence from the past, set himself to the difficult task of putting the scientific method to the problem of consciousness and man's mind. He developed a technique readily susceptible to detailed analysis, and he has entered the fourth decade of his work with considerable stature in the scientific community.

On the basis of rigidly controlled experiments with countless thousands of subjects, Dr. Rhine has been able to establish by various demonstrable means that there is a nonphysical factor in the mind of man which probably operates in accordance with laws apart from those of the physical world. But when he published his first major work in 1937, it was said that a storm of controversy shook the scientific world. Orthodox psychologists, whose science was based upon the premise that nothing took place in the mind that was not of a physical nature, fired both barrels. They not only attacked Dr. Rhine's experiments but his statistics as well. We must observe, however, this seems to be a cycle in the investigative process. because Hammond, Horn, and Ochsner have recently enjoyed similar attentions.

It is not without significance that one of the most respected seats of higher learning in the western world, Duke University, has steadfastly supported the work of Dr. Rhine and his wife-colleague, Dr. Louisa Rhine. In turn, they have made this institution a world focus in their field of study. Both have written extensively on extrasensory perception—ESP—an expression they have made a household word, and on psychokinesis as well.

MEDICAL ASPECTS

The Drs. Rhine have a deep interest in the medical aspects of their studies, although they are the first to express reservations and to concede knowledge gaps. That they appear to be their own severest critics imparts credibility to their research and findings. Their unfailing application of scientific principles, their open invitation for analysis and criticism, and their candid reporting reinforce their posture as serious students who ought to be taken seriously.

On the same side of the coin, medicine has recognized the Rhine investigations from more than a mere curiosity standpoint. Dr. J. B. has filled a lectureship before the Royal Society of Medicine at London. Both he and Dr. Louisa, as well as their colleagues in the Parapsychological Laboratory at Duke, have appeared as essayists before scientific convocations of American medical organizations. An audience of about 600, the substantial majority of whom were physicians, was present at the association's symposium at the 97th Annual Session.

The fund of knowledge being amassed by the Rhines, their colleagues, and their fellow investigators all over the world is too substantial to be ignored. It is too credible to be summarily dismissed. It is too suggestive of new vistas of understanding about the whole man to be excluded from medicine's sphere of legitimate interest. ★★★

918 North State St.

The Field of Parapsychology

J. B. RHINE, Ph.D.
Durham, North Carolina

PARAPSYCHOLOGY, a comparatively new branch of science for medical discussion, deals with what are now referred to as psi phenomena, or, to use another word, parapsychical occurrences. These terms, psi and parapsychical, are roughly the same in common language as the phenomena called "psychic." What seem to be experiences based on psi phenomena happen frequently to some people in daily life. The phenomena are identified most easily by saying that they seem completely unexplainable by any known natural law. Some of them bring information that is not supplied by the senses. Those are classifiable as involving extrasensory perception or ESP. Others consist of the occurrence of unexplainable physical effects in the surroundings. These are known as psychokinetic effects, abbreviated to PK.

These ESP and PK effects together make up an exchange between the individual and his world without the use of the senses and muscles and hence without any physical basis of explanation. The extrasensory form of psi can be divided into telepathy, the ESP of another person's experience; clairvoyance, the ESP of a objective event, and precognition, the ESP of a future happening. These exchanges can be referred to generally as psi communication between a person and his environment.

"What has all this to do with medicine?" I think I can safely point to a very general principle all physicians have recognized as medicine has gone on expanding its territory. It is this: Anything discovered about man and his nature is sooner or later found to be involved in his illness and health. We can say already that parapsychology is no exception. But the early stages of a newly discovered field cannot be expected to reveal the full potential. In fact, the implications and bearings of a discovery are likely to be slow in emerging.

Another pertinent question is whether a sound scientific job can be done on such a mysterious area of claims as these in parapsychology. This side of man's experience is immediately identified with his superstitions, and perhaps a little more respectfully with his religious beliefs. You will see that in these strange experiences the assumption can be made of a sort of transcendental set of powers, such as man has through the past credited largely to his divinities and to the prophets and seers. It would be through powers on this level that they have been assumed to communicate with human beings.

All this is indeed true, but is it not equally true that men at one time believed the spontaneous occurrences of life—the birth of a child, the descent of plague upon a community, the mystery of love and the tragedy of death—all to be supernaturally controlled events in the hands of the gods? Yet the very act of taking these off the shelf of the supernatural brought out the biological principles underlying them. The marvelous mastery over life and death which modern medi-

Dr. J. B. Rhine and his wife Dr. Louisa E. Rhine were students at the University of Chicago when they first became interested in the unexplored field of parapsychology. One day a professor in their department related an instance of seeing a dream come true to every detail. "I thought this was much more important than the botany he was teaching," relates Dr. J. B., "so we changed from the study of botany to psychology—the closest jumping off place." In his opening paper to the symposium, Dr. Rhine discusses the nature of parapsychology.

From the Parapsychology Laboratory, Duke University. Read before the Symposium on Parapsychology, 97th Annual Session, Mississippi State Medical Association, Biloxi, May 10-13, 1965.

cine has developed is but one of the great consequences of examining more closely the "supernatural" area of the past.

For that matter, the events of inanimate nature were also, in ancient man's view, as miraculous and divinely controlled as the strange happenings studied in parapsychology. But they, too, were found to be understandable and, to some extent controllable, through the studies which gave us the physical sciences. Men have greatly gained through this conquest of what was once thought to be a section of the supernatural world.

In the search the parapsychology worker makes for the lawful principles behind the remaining mysterious things people report of parapsychological nature, we hope to rescue another broad domain of the universe from the realm of mystery and misunderstanding. If thereby we can as greatly increase man's understanding of himself and mastery of his own conduct as he has acquired from his other searchings over other domains of nature first thought to be supernatural, there can be no question of the incalculable importance of the objective.

When we come right down to it, however, the human experiences which can be considered as the beginning of the science of parapsychology need not be thought of as supernatural. They need not in any sense be regarded as any less natural than anything else that happens to a man. The parapsychological approach to them is that of the natural scientist. We take these experiences as they occur, classifying, analyzing, gaining insights, and planning a research program on the basis of them, after the manner of scientific investigation in the other divisions of the natural sciences.

Before going on to the actual methods of experimental study and the findings that have been derived from these studies, as well as some implications they may have, I think it would be appropriate for some firsthand case reports to be presented for the identification of the field somewhat more clearly, an indication of the way in which the experiences occur, and a more realistic basis for understanding the further judgments to be made. The discussion logically progresses to the study and analysis of spontaneous psi experiences. Dr. Louisa Rhine will select typical illustrative examples from the large Duke collection which she has compiled. ★★★

NATURAL SELECTION

The story is told that Charles Lamb, the noted Elizabethan essayist, was giving a lecture when somebody in the audience hissed. A stunned silence followed, because the courtly group was supposed to be very proper.

Calmly, Lamb said: "There are only three creatures who hiss, a goose, a snake, and a fool. Come forth and be identified."

—James Ward, *Jackson Daily News*

Spontaneous Psi Experiences

LOUISA E. RHINE, Ph.D.
Durham, North Carolina

THERE ARE SEVERAL REASONS for giving examples of actual experiences in which psi seems to have been involved. In the first place, they indicate clearly the area of psi included in the field of parapsychology. Also, experiences from real life first raised the question whether the kind of phenomena they suggested really exist. They thereby led to the research which is now included in the field of parapsychology and, thirdly, since the occurrence of psi has been established, these life experiences still illustrate the general ways in which it manifests itself spontaneously.

The subject matter of psi experiences covers a practically unlimited range of topics, including frequently matters of health or well-being that verge on or may include medical topics. This does not necessarily mean, however, that medical knowledge is secured this way (in spite of the many claims of bizarre cancer cures secured in dreams) or that this is the solution of a doctor's worries and perplexities, although sometimes an unaccountable hunch covering a certain patient or diagnosis can well be laid to ESP. In general, however, most of the references in reported ESP experiences, medical or otherwise, are on the personal level.

Of the three types of ESP, the one most commonly spoken of, although not the one most often reported, is the telepathic. An example of this, though in a rather unusual form, comes from a man in New York state. He and his sister were very close but she married and moved to a distant state.

After a time the young man began to have unaccountable spells of nausea and illness in the morning which went away later in the day. Finally he began to suspect the cause was not his own. He wrote his sister and asked if by any chance she were pregnant and having morning sickness. She was, but had not yet announced the fact. He had known it without being told. His own symptoms had told him. It appeared to be a telepathic situation.

The case is not an entirely isolated one, though when males are involved it is usually a husband rather than a brother who registers the effect.

Over 10,000 cases illustrating the various forms of extrasensory perception have been collected by Dr. Louisa E. Rhine in her work at the Duke University laboratory. In this paper she draws from this collection to illustrate clairvoyance, telepathy, precognition, and psychokinesis. She explains the importance of the recording of actual experiences, noting that such experiences first raised the question of a possibility of extrasensory perception and led to the research now included in parapsychology.

Many instances are reported, too, by female relatives, of labor pains at the time a baby is being born. Usually these experiences come at times when the birth is unexpected to the one who has them, but almost always, when a close emotional link (mother or sister) exists. One report, however, broke the rule. This was the case of a woman waiting to adopt a baby of a specific unmarried mother whom she did not know and had never met. But the night that baby was born she suffered labor pains. Although she had not known the date, she did suspect by morning that "her" baby had arrived. Although telepathy is most frequent between emotionally linked persons, it is not confined to them, when as in a case like this one, strong interest of some kind exists.

A medical experience that can be classed as of the clairvoyant kind, was reported by an elderly physician one evening, when he happened to be

From the Parapsychology Laboratory, Duke University. Read before the Symposium on Parapsychology, 97th Annual Session, Mississippi State Medical Association, Biloxi, May 10-13, 1965.

in an audience to which my husband spoke on ESP. In the discussion following the lecture the old man got to his feet and said he wanted to tell of something which had happened in his practice many years before and about which he had puzzled many times in vain. "But now," he said to the lecturer, "since you have told such tall ones, I can tell mine, too."

As a young physician, the speaker had practiced in a mining town. Among his patients was a pregnant woman whose husband had lost a hand in a mine accident. Somewhere along in her pregnancy, the patient "got the notion" that her unborn infant would only have one hand. The doctor argued with her, explained it was an idea suggested by her husband's injury, that she was fine, the baby normal, and there was no reason to fear it was not. He explained that such ideas as hers were only the result of "old wives tales" and that things like that just did not happen. In spite of all his good logic, however, the woman remained unconvinced. Her baby would have only one hand and he could not convince her otherwise.

When it was born, the baby only had one hand. "Now how" the old doctor asked, "did she know it?"

It could have been by clairvoyance which told her the situation before any sensory information was available. Without it, the only explanation would have been—no explanation, for the whole episode would have had to be considered just a coincidence between the actuality and an unaccountable whim suggested by the misfortune of the woman's husband.

PRECOGNITION AND DREAMS

Although both telepathic and clairvoyant types of experiences often take the form of dreams, the third type, the precognitive is especially likely to come this way. The time between the dream and the fulfillment varies from a very short one to many years. That of a woman in a western state preceded the event by only a few weeks. She took a short daytime nap one day and had what seemed at the time like a horrible nightmare. In it she found herself completely rigid, unable to move a muscle. She had one child, a 10-year-old daughter, and she thought the child too was involved, that she was beside her crying and gasping for breath. She awoke dripping with perspiration, trembling violently and so upset generally it took her some time to pull herself together and realize it was not real.

A week later the mother was taken very ill with painful backache and a blinding headache. Her daughter hovered over her concerned and trying to help but she got no better and was taken to the hospital. By that time, however, she knew without the doctor's diagnosis that she had polio. She was completely paralyzed except for the fingers of one hand.

Eighteen days later the little girl was admitted to the hospital with bulbar polio, from which she died the same day. The dream seemed to have been advance notice of the terrible tragedy ahead.

In spite of the fact that precognitive experiences do sometimes foretell calamities, as in that case, the more cheerful aspect of them is, that these are only occasional. The large majority concern fairly unimportant, even trivial snatches from some future episode or scene.

ESP IN NURSES

Although both doctors and nurses report ESP experiences, those from nurses are more frequent. In fact, in numbers, nurses' reports top those from any profession except that of "motherhood," and this, regardless of the type of experience involved. Nurses who "know" intuitively where special need exists, or the outcome of an illness even against prognosis, are far too many all to be the result of coincidence alone. Their number raises the question whether a subtle selection of nurses with tendencies for ESP goes on, or whether the circumstances of the profession favor its expression. Possibly both influences have a bearing to an extent.

Besides these three types of ESP, the final type, that of PK, psychokinesis, stands as less defined as yet. This is the kind in which matter is influenced by mind. It could have played a part in an incident reported to us one day a few years ago by a personal friend. She was the wife of a Duke University professor and a domestic science teacher in a local high school in the cotton-mill section of Durham.

Still excited and even awe-stricken, this teacher called one evening to tell what had just happened. The day before, her class in cooking was making fudge and a bad accident had occurred. Somehow the boiling fudge was spilled over the hands of one of the students and spattered on several others.

Crying and frantic with pain the girl with candy

covered hands rushed out of the room, saying she was going home. Her father would cure the burn. By the time the teacher could make arrangements for someone else to take charge of the classroom and had followed to the home, the girl had been there well ahead of her. The father, a mill-worker on night shift, and also as the teacher learned a "fire-blower," had taken over. He had "treated" his daughter, the pain had subsided, and the mother was washing the candy off her daughter's hands.

The next afternoon, after school, the teacher had stopped at the home expecting to see two badly burned and blistered hands, if only because the girls who had been spattered the day before had come to school with blisters. This one had stayed at home. But no blisters showed, nor any bad burning. The hands, the teacher said, were still a little red, but were neither painful or very sore. It seemed a miracle. And in the wonder of it, the teacher came at once to tell us because she knew we would be specially interested.

The episode can illustrate PK, the power of mind over matter. Whatever the mechanics of the effect, and they of course are still unknown, it seemed to that teacher at least the father's "treatment" somehow so affected the girl's own mental attitude that her body had to act accordingly.

In parapsychology, the PK principle has been discovered by experiment. It shows the mind able to affect a physical system. In the experiments thus far the system affected has been a purely physical one, as for instance when the course of falling objects has been affected by the will of the experimenter. No effect on a physiological system has yet been demonstrated, but in a case like this it seems possible that one occurred, that somehow the mental set affected the injured part and prevented the natural damage that would ordinarily follow in such a case.

These four examples are possible instances of the spontaneous occurrence in life situations of the types of phenomena parapsychological experimentation has demonstrated. In resumé there are three types of ESP—telepathy, clairvoyance, and precognition—and the psychokinetic or PK effect. While no one can say with finality that these phenomena were involved in these particular incidents, they very well could have been. For with ESP in the laboratory, out of it, its effects would certainly show up in otherwise inexplicable occurrences just like these, and it was the occurrence of experiences of these four types, and particularly the telepathic type, that made the original suggestion that what we now call psi communication is a reality. ★★★

DRY POST

The water shortage in the east has become acute. Letters received from New York now have the envelope flaps tucked in and the stamps pinned on.

Parapsychology and Medicine

J. B. RHINE, Ph.D.
Durham, North Carolina

In his discussion before the Symposium on Parapsychology, Dr. Rhine compared parapsychology to a rare and unknown disease. He told the assembled physicians, "We can diagnose it and recognize it, but it will be a long time before we know the etiology and we're far away from therapy or control." In this paper he discusses the main findings and current developments in the field, and concentrates on the eventual relation of parapsychology to medicine.

How can spontaneous cases of ESP be dealt with scientifically? As my wife indicated, the original value of this case material was in the questions it raised. As doctors know from handling of case material, it can be quite valuable. As it falls into certain categories, each category becomes a guideline, and the clinical impressions lead to the laboratory for experimental verification. This procedure has been followed in parapsychology as well as in most natural sciences.

Of the four types of spontaneous experiences, some are much more easily dealt with than others. The easiest of all four is really that of the clairvoyant type illustrated by the apparent awareness of the mother of the condition of her unborn child. This is extrasensory awareness of objective targets. To test a person for this ability all that is necessary is that he be interested and willing to be tested, and that the experimenter have elementary acquaintance with statistical method. An elementary technique such as card-guessing can be used. A pack of any kind of cards will do, but we designed for our own tests a special pack consisting of five suits and with five cards of each suit we had a 25 card pack from which chance guessing would give an average score of five. Thus, computation of the statistics was extremely simple.

In the experimental program at Duke in the early 1930's when most of the initial experimentation was done, several years went by devoted mainly to the development of special tests and techniques for getting evidence of ESP. It was not until the fall of 1933 that we felt we had reached a definitive test—one that could stand criticism from any intelligent angle. At that point it was decided to publish a report in which the following experiment was the climax.

From the Parapsychology Laboratory, Duke University. Read before the Symposium on Parapsychology, 97th Annual Session, Mississippi State Medical Association, Biloxi, May 10-13, 1965.

A subject, H. P., was selected because he had been a dependable performer over many months. After successfully guessing cards at a significant rate with the cards completely out of sight (the clairvoyant condition), we removed the cards to another building a hundred yards away from the subject and in this way completely eliminated the possibility of sensory cues. There at the rate of one per minute, the cards were isolated while the subject in his separate building, recorded his guesses. At the end of the run through the pack, the card order was recorded by the experimenter. Independent checking was made possible by the preparation of duplicate records before the checking was begun.

A report in 1934 contained the results on a 12-run series of this type with H. P. From the 300 trials a total of 60 hits should have been expected from pure chance. Actually 119 hits were made. This high score would not be expected from pure chance but once in a hundred trillion of such experiments. A second series was run shortly after, in which as an added safeguard, I was present with my assistant throughout the experiment. Approximately the same average score was obtained. These successful experiments, we decided,

gave adequate reason to accept the conclusion that extrasensory perception, probably of the clairvoyant type, had occurred.

With the publication of the report, "Extrasensory Perception,"[1] a number of attempts were made, in this country and abroad, to repeat the experiments. Some of them were carried out with an attempt at faithful observance of the conditions, and among these were some confirmatory findings. Some of the reports gave even higher scores, some contained longer series, as well as other interesting features and developments. It was soon found necessary to establish a special periodical, the *Journal of Parapsychology,* for the reporting of these research findings, which have continued through the years and now have spread around the world. In this journal may be found reports from South Africa, Tasmania, Argentina, Holland, Finland, and Japan. One of the most recent is a study by three Dutch scientists, carried out in Prague, with a Czech investigator who is supported by funds from our laboratory.

OTHER TYPES OF PSI

The other types of psi, telepathy, precognition, and psychokinesis, also were investigated at the Duke Laboratory in the early 1930's. They are more complicated to investigate, and I will only mention the general methods by which their occurrence was established. Telepathy was the most involved because it is difficult to exclude clairvoyance in testing for telepathy. On this account it is experimentally the least definite in the series. It is less conclusively established, even though it is the most popular with the general public.

Precognition was relatively easily investigated by asking subjects to predict the order of a pack of cards as it would be after a thoroughly randomized shuffling. The psychokinetic effect was tested by utilizing the familiar belief many people have that they can influence the fall of dice in dice-throwing games. Around these techniques of cards and dice there were, of course, elaborate precautionary procedures developed and conditions were carefully controlled.

As you probably know, however, the work of the Duke Laboratory went through a period of vigorous critical attack. It was necessary for years to spend much time in meeting these attacks in order to maintain our position. But as the work of our laboratory was independently confirmed by other investigators and as the work spread to different countries and continents, a point was finally reached when public criticism of parapsychological research practically ceased. No one was able to find serious defects in the studies on which we ourselves based our conclusions. As a matter of fact, the findings themselves show such lawful relationships to exist as to give immediately the earmarks of rational scientific character. As you know, when a new finding begins to show a pattern, the easy dismissal stage is over.

GENERAL FINDINGS

What are some of these general findings? First of all, the laboratory tests showed what, from the case studies, was to be expected. Also the very spontaneous character of the cases was persistent in the laboratory as well.

On that account statistical methods had to be used. The subject in an experiment did not know reliably whether or not his ESP ability was working. It had even a tricky way of reversing so that at times he might consistently avoid the target, or the hits might consistently be made on the target next to the one intended. Some of these seeming anomalies led to the realization that the psi process is an unconscious one. This was a very important and useful discovery even though a baffling one too, but the process now is recognized as an unconscious one.

Likewise, it was found that a person who had one type of ability could, if he were encouraged to try, manifest the other types as well. All four were found to be subject to the same favoring and hindering conditions. All were healthy and evidence of them scattered in about the same way among the general population. All responded in a similar way to rewards, distractions, and other such external circumstances.

One general characteristic that held for all four types of psi was that no matter what physical variables were introduced, they seemed to have no effect upon the success of the experiment. Distance did not matter nor barriers between the subject and the object to be identified. Precognition occurred as easily in tests as ordinary clairvoyance. With the PK tests, the effect was produced with large dice as well as small ones, with many as well as with one. These were indications that psi is not a physically conditioned phenomenon, a fact actually to be expected from the study of the case material in which neither distance nor time were barriers.

It is this nonphysical character of psi that is its most distinctive and important feature. It is this, too, which causes the greatest trouble in the acceptance of parapsychology by the conventional sciences. There is today an almost religious faith in materialism among the scientists, and the para-

psychological testimony is a challenge to this conventional, metaphysical assumption. These results simply rule out the possibility of a materialistic interpretation of the human individual. They unmistakably show something in man that goes beyond the space-time limitation.

Our experiments have been designed in some cases to bring this absence of a space-time limit to a sharp focus. In one experiment the subject was in Paris when she recorded on record sheets, the card order she predicted the target order in the adjoining column on the sheet would be *one year* from the date of the experiment. A year later another experimenter developed the target order by a carefully prescribed randomizing procedure. Two experimenters checked the results and found that the one-year prediction gave a significantly large number of hits. This indicated this subject's capacity to transcend a year of time and 3,000 miles of distance in this precognitive operation. As in the spontaneous cases themselves, the time-space factor was not a deterrent condition.

There is not time to sum up the extensive evidence from other sources in support of this independence of the psi process from the physical laws of nature as represented in space-time-mass relations. But those who are interested can explore this evidence as far as they desire.

We can see, however, that here is a new challenge to old conventional conceptions of nature. It is not all physical. There is a component in the human makeup that is not restricted to the physics and chemistry that make up so important and so large a portion of it. In a word, here is scientific confirmation of what man has intuitively interpreted his nature to be. It remains for further exploration to see how much of a part this is, what he can do with it, and whether it justifies the interpretation which religion has built on this supposition. It would seem from this that a certain effective guidance of his physical system can indeed be exerted through the principles of his parapsychical nature.

MEDICAL SIGNIFICANCE

For medicine we may rightly say this is something that cannot help but have significance, and yet it would be unwise to go far in attempting to say at this stage what the order of this significance will prove to be. Already, however, there are enough cases coming up spontaneously from the medical world to remind us that the branch of medicine that will one day be called something like parapsychological medicine will not be an insignificant one. Let me mention quickly a very few of these, without discussion, and with only the first hint that each one gives of a problem to be investigated.

A pediatrician from California telephoned to ask advice on a case involving two children, identical twins. Each time one had been treated medically the other, even when in a different room or building, had echoed the effects. The mother insisted that scheduled tonsillectomies must be carried out simultaneously.

Another recent case involving twins ended with the unaccountable, simultaneous death of the two at the age of 32, when they were separated in different wards of the state hospital, the separation being over their vigorous protest.

A physician in Florida treated a distraught mother of a soldier in the Far East for five days, with sedatives and other care, following a nightmare in which she saw her son go down in a burning plane. On the sixth day a telegram from the War Department confirmed the veridicality of her dream.

Another telephone call had to do with a series of threatening telepathic experiences (as the patient reported them) which quickly, however, dissolved into elementary delusions on examination. Others, similar to the case of the school girl with the boiling fudge, are never recorded because they are buried in the folk practices that elude the attention of science.

PLENTY OF MYSTERIES

These and a range still more extensive remind us that we are living in a world that still has plenty of profound mysteries. Medicine is advancing into these areas slowly, and the rate of progress is partly due to the disinclination of the basic sciences to cross certain deadlines. The wart healer goes on practicing his mysterious art, and the psychologist is still hesitant to dip an exploring hand into the dark mysterious waters of the unconscious to find out what might be doing these strange things (like for instance, the sudden greying of hair) that come in merely as case reports in psychosomatic medicine.

Is it not enough for us to know that there is a realm of unexplored principles governing man's health and disease which still lies beyond the range of orthodox science? Certainly the situation calls for a careful scientific exploration of this

territory, without anticipatory commitments, without hasty claims, but with a determination to find out what man is in his totality? Only when that is known can we really practice with maximum enlightenment and efficiency in whatever area of problems man's well-being is concerned. The very attitude taken toward the patient, or the student, or the client, or the prisoner, or the child, is dependent upon this breadth of knowledge.

It is a significant historic fact that the healing arts, along with many others, were once bound up with the religious life of man. It was all part of the responsibility of the temple. No one, of course, wants to go backward into any such stage with any of the needs of mankind. Rather, one wants to see the whole picture of human life integrated for the better corrective judgment of those special practices and needs. If the same order of advance into the knowledge required had been maintained in this field as in those, we would today have a well-rounded picture of man's nature from which to view his current needs and disorders. It is a step toward this larger understanding of man that parapsychology represents. It is mainly in the promise of a contribution toward that larger understanding, however, that we submit and offer such reports as this.

We have come to think that a larger conception of man's nature is needed in guiding the sciences that have to do with him and in helping to keep the totality of man's problems uppermost in the minds of the inquiry. For this reason we think a composite concept is needed—a science of the nature of man that will emphasize what is unique and distinctive in his nature—what it is that identifies him as distinct from the larger orders of the universe to which he also belongs. It is for the advancement of this science that we have established in Durham, The Foundation for Research on the Nature of Man. ★★★

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L'AMOUR MORT

Near the school for morticians lived a beautiful young woman who dated some of the students. Her mother had a particular dislike for one of the students and forbade her daughter to see him again. One evening, the mother looked down from her upstairs window just in time to see a hearse driving off from the house.

"I told you not to see that young man again," she called to her daughter.

"It's all right, mother," came a cheerful reply. "That was the hearse of another caller."

Radiologic Seminar XLII: Bilateral Subdural Hematomas

ROBERT P. HENDERSON, M.D.
Jackson, Mississippi

THIS CASE IS REPORTED to emphasize one of the serious complications which may occur with long-term anticoagulant therapy. In contrast to intracerebral bleeding, which is much more common, a subdural hematoma is amenable to surgical treatment and pathological reversibility.[1]

CASE REPORT

This 73-year-old white male was admitted to the Mississippi Baptist Hospital with a history of headaches, beginning approximately six months prior to admission. These headaches had become much worse within the last few days and were described as occasionally throbbing. There was no history of trauma. He had had a coronary occlusion two years prior to admission and had been on wafarin sodium since that time. The initial examination was essentially normal with no neurological abnormality being detected and no heart abnormality identified. The admission prothrombin time was 16.5 per cent of normal with the control being 13 seconds and the patient's prothrombin time being 27 seconds. Within two days this had been corrected with the patient's time being 15 seconds compared to a control of 14 seconds, being 85 per cent of normal. A carotid arteriogram then revealed a bilateral subdural hematoma.

A craniotomy was performed bilaterally, which revealed six fluid ounces on the right and four fluid ounces on the left, with there being a well-formed parietal and visceral membrane on both sides. The subdural hematomas were seen to encapsulate both the right and left cerebral hemispheres. The pathology report described an old blood clot covered by a membrane made up of granulation tissue and young fibroblasts consistent with a chronic hematoma.

Following the craniotomy, the patient did quite well with relief of headaches and was discharged



Figure 1. Peripheral branches of the middle cerebral arteries which course over the surface of the brain are displaced medially. There is more displacement on the right than the left. (Retouched for purposes of illustration.)

Sponsored by the Mississippi Radiological Society.
From the Department of Radiology, Mississippi Baptist Hospital.



Figure 2. The venous phase of the study shows these superficial veins coursing along the brain surface to be displaced from the inner table of the skull. (Retouched for the purposes of illustration.)

two weeks later. At three months the patient was still doing well with no neurological abnormality.

Twenty years have passed since anticoagulant therapy was introduced, and controversy still exists as to the indication for such therapy, particularly in arterial occlusive disease. Olwin and Paul[2] concluded that only rarely can patients not be controlled on a regimen of anticoagulant therapy, but they emphasized the necessity for rigid control of the administration of the anticoagulant, the laboratory methods of controlling the properties and characteristics of the various anticoagulants, the physical status, and the intelligence and cooperation of the patient. Seaman[3] *et al.* in a double-blind controlled study of continued prophylactic anticoagulant therapy following myocardial infarction demonstrated no difference in survival of the patients receiving phenindione as compared with those receiving placebo, or no treatment. After seven years they had not demonstrated any advantage of prophylactic anticoagulant therapy with regard to mortality, nor did they feel that morbidity had been reduced by the use of anticoagulants. The indications may be disputed, but the contraindications should include patients with blood dyscrasias, with cerebral or other hemorrhage, any recent operation on brain or spinal cord, any hepatic or renal insufficiency, ulcerative lesions of the gastrointestinal tract, bleeding granulomas, and visceral carcinoma. ★★★

1151 North State St.

Appreciation is expressed to Dr. L. R. Hodges for the use of this case.

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VIN ORDINAIRE

The surgeon was concluding arrangements with a wealthy patient to perform a minor procedure. "Would you like a local anesthetic?" he asked.

"Of course not," retorted the affluent patient. "I can afford the very best, and I'd like something imported."

Clinicopathological Conference LXIX

Conducted by the Department of Pathology
University of Mississippi School of Medicine
Jackson, Mississippi

THIS WAS THE FIRST University Hospital admission for this 2-day-old female Indian entering with chief complaint of "grunting respirations." She was the product of a complicated pregnancy of a gravida II, para II, abortion 0 mother. The complications were anemia due to hookworms requiring transfusion of two units of blood and preeclampsia. The mother was seen only five days before delivery.

The infant weighed 7 pounds, 2 ounces and was born at 9:00 p.m., Sept. 14, 1963 of a sterile controlled OA delivery, APGAR 9, with immediate respirations. The mother had retained the placenta requiring manual extraction. Initial examination of the infant at 10:00 p.m. on Sept. 14 was unremarkable. Examination at 8:00 a.m. on Sept. 15 revealed dextrocardia but clear lungs. At 3:00 p.m. on Sept. 15 grunting rapid breathing was noted. At 8:00 p.m. on Sept. 15 definite respiratory distress was noted but without cyanosis. She was started on penicillin and streptomycin and intermittent oxygen. On Sept. 16 she was x-rayed and referred to the University Hospital.

She arrived at 6:10 p.m. on Sept. 16, 1963 with the above history. Initial physical examination revealed a pulse of 120 which was regular, respirations of 72, temperature of 99.4 rectally. She was a well-developed Indian female with obvious respiratory distress. She had a hemangioma on the forehead, both upper eyelids, and the upper lip. She was well hydrated. The conjunctivae were clear, fontanels were open, and the head was molded. Throat was negative. Neck was supple with trachea shifted to right. Chest examination revealed bilateral symmetrical substernal retractions with decreased breath sounds in the left basilar area. There were no rales or rhonchi. The heart sounds were audible to the right of the sternum without murmurs. Bowel sounds were heard in the left lower costal margin area. The liver was 3 cm. below the right costal margin. Bowel sounds were active. The abdomen was soft, flat, without distention. Spleen was not palpable. Genitalia were normal and anus was patent. There was no cyanosis of extremities and muscle tone was good. There were good suck and Moro reflexes. Admitting impression was diaphragmatic hernia.

The patient in CPC LXIX is a 2-day-old female Indian entering with the chief complaint of "grunting respirations." She expired after four days. Pertinent findings were cyanosis, a hemangioma which extended over the forehead and both upper eyelids and the upper lip, a cardiac murmur, and a mass in the left side of the chest at the base.

Discussers are Drs. Joel Brunson, Robert Sloan, Edward M. Lowicki, Herbert Braunstein, and David G. Watson.

Initial laboratory studies revealed a hemoglobin of 117.2 with 20,350 WBC/cm. Differential white count revealed 1425 monocytes, 7123 lymphocytes, 611 eosinophils, 9972 segmented neutrophils, and 1221 bands. Urinalysis revealed light yellow and clear urine with a pH of 6, which was negative for protein and glucose. There were 5-10 WBC/HPF and 0-3 RBC/HPF in the urine. Test for reducing substances was negative; acetone in the urine was 1+, and there were a few bacteria with moderate epithelial cells. Other studies revealed BUN of 17 mg per cent, Cl 110 mEq., CO_2 17 mEq., K 5.7 mEq. and Na 132 mEq.

An EKG revealed right axis deviation suggesting right ventricular hypertrophy even allowing for mediastinal shift. This was thought to possibly represent cor pulmonale. Chest radiograph revealed displacement of the heart and mediastinal

structure towards the right with a rounded density seen in the left lower chest posteriorly which measured approximately 2 x 4 cm. in size, being adjacent to the diaphragm. There was apparent hyperradiolucency of the left upper lung with slight deviation toward the right. The right lung appeared to be somewhat over expanded. The left hemidiaphragm was somewhat higher than the right. Bony structures were normal. Upper GI series with 50 per cent gastrographin revealed esophagus, stomach, and visualized small bowel to be normal except for displacement of esophagus to the right. Repeat chest radiograph on Sept. 17, 1963 revealed little change except for less evidence of hyperaeration of the lungs and some apparent stranding in the perihilar area and the right lower lung.

HOSPITAL COURSE

The patient was given intravenous fluids and 5 per cent D/W via feeding tube but oral feedings were discontinued. She also received penicillin in the intravenous fluids and streptomycin IM. She was digitalized on Sept. 17, 1964.

Surgery was consulted and an attempted bronchoscopy on Sept. 17, was unsuccessful as the bronchoscope available was too large. The patient continued to have labored respirations increasing to 92/minute with pulse of 140 to 160. Temperature rose to 101 and she had some inspiratory wheezing.

On the morning of Sept. 18 she was noted to have shallow respirations with poor exchange of air, and she was pronounced dead at 9:15 a.m. as intubation and intracardiac adrenalin were not effective in resuscitation attempt.

DISCUSSION

Dr. Joel Brunson: "This case will be discussed by the department of surgery. We have a visiting pathologist whom I will introduce a little bit later."

Dr. Edward M. Lowicki: "I presume that everyone has read the CPC so I won't repeat it except to say that in this case we have a child who had a life span of some four days. We know little about the family background. It would seem that the predominant areas for discussion would revolve about the short duration of life, the presence of cyanosis, and the fact that there were at least two congenital abnormalities and probably a third. The first abnormality, which is the gross one, was the hemangioma which extended over the forehead and over both upper eyelids and the upper lip. The second was a cardiac murmur which was evidenced by the x-rays and by the subsequent appearance of cyanosis. The third was the mass which appeared in the left side of the chest at the base. I wonder if we could have the radiology department interpret the films."

FILM DATA

Dr. Robert Sloan: "Chest films were obtained on the two days that the infant was in this hospital. On a film obtained the first day the mediastinal structures were shifted considerably to the right. What one would assume was the left hemidiaphragm was elevated, and there was a homogenous mass-like density at the base of the left hemithorax. In the lateral view it appeared to lie far posteriorly. At fluoroscopy on the first day, the esophagus was displaced to the right. What could be seen of the upper gastrointestinal tract appeared normal. Films taken on the second day showed basically the same chest pattern. It is difficult to explain all of the photographic findings. The obvious mass at the left base could most likely be explained by a pulmonary sequestration, with a diaphragmatic hernia containing something like the spleen being a second possibility. Why the mediastinum was shifted to the right is not so easily explained. The mass itself is not large enough to cause such a deviation."

Dr. Lowicki: "Then the discussion, as I see it, should revolve around the possible correlation between all of these anomalies or if that is not possible, then an evaluation of the relative possibilities of the multiple anomalies. Probably the most common tumor of the chest and the mediastinum in the newborn is a neuroblastoma. In the absence of any other abdominal findings, the interpretation of the mass in the left lower chest on this basis would be entirely speculative. The same applies for embryoma of the kidney. Among the other possible tumors of the mediastinum are teratomas. These frequently, at least in the series of Schlumberger, are in the interior anterior mediastinum, but they may appear anywhere. These are frequently called dermoids or dermoid cysts, but I believe that the pathologists will bear me out that if enough sections are taken of these so-called dermoids, all three embryological germ layers will be found. Therefore, it is more proper to call all of these tumors teratomas. Another possibility, of course, is a thymoma but since this is a posterior inferior location, it would be highly unlikely. We have some evidence, at least on one of the oblique films, that an enlarged thymus

gland is present and another possibility of course is thyroid, but that would be highly unlikely.

INTRIGUING POSSIBILITIES

"One possibility that has intrigued me for some time is that of a neurogenic cyst or duplication of the esophagus or abdominal alimentary tract either with abdominal connections or entirely within the chest. Now these are invariably in the posterior mediastinum and in their wanderings may spill over or at least cast a shadow at some distance from the mediastinum. In the early 1950's Gross, because of his reputation in pediatric surgery, I believe, got the best audience for his report of three alimentary duplications which had their origins in the abdomen but which did cast a thoracic mediastinal shadow. Frequently, what occurs is that a true diverticulum—that is one on the antimesenteric border—will be present and travel in the retroperitoneal structures superiorly into the chest, usually on the right side of the chest. It will hug to the mediastinum closely, but if it is an extremely long diverticulum, it will act like an esophagus with achalasia. That is, it will double on itself and proceed in a cephalod direction.

"An extremely interesting thing about this is that the world literature which I reviewed showed 15 cases of this anomaly occurring in patients under the age of 10. However, the case that I was especially interested in and had the opportunity to see was a 31-year-old man in whom this occurred. Another interesting thing is that in 100 per cent of the cases, and I don't believe that this was mentioned as a true syndrome, but in every case that I could find there was associated with this intestinal diverticulum an anomaly of the cervical vertebrae or the upper thoracic vertabrae in the form of fused vertebrae, hemivertebrae, or a diastematomyelia. Frequently, these children exhibit the Klippel-Feil syndrome with short neck deformity.

"I noticed that Dr. Sloan didn't say anything was abnormal about the cervical vertebrae here so I would think this diagnosis is highly unlikely. I would call the condition to your attention, especially in pediatrics. One can virtually make the diagnosis with certainty, if a mediastinal mass is found in combination with abnormality of the low cervical or high thoracic spine and the presence of blood in the GI tract either in vomitus or by the guaiac test of the stool. One can say with almost 100 per cent certainty that this is an intestinal duplication of the small intestine extending into the thorax. The reason for the blood in the GI tract is the presence of heterotopic gastric tissue within the thoracic portion of this duplication.

"With the appearance of the angioma of the face I found it intriguing that perhaps the same situation might be occurring in the low thorax. Certainly, thoracic lymphangiomas of the cystic hydroma type have been described in the chest, and it is not inconceivable that a hemangioma of one area might manifest itself by an appearance elsewhere. If it were an extensive one, it should or it might act as arteriovenous fistula. A brief review of literature failed to disclose such an association. However, it is to be recalled that the hereditary telangiectasia of Render, Osler and Weber has been shown to be coexistent with pulmonary arteriovenous fistulae. In fact, one family in Ludvick, Sweden, has been extensively studied. Out of 17 members of the family, four have been shown to have pulmonary AV fistula.

DISCUSSER'S DIAGNOSIS

"Another possibility, as Dr. Sloan mentioned, is pulmonary sequestration. In the absence of any other gross pulmonary abnormality, it would be extremely difficult to diagnose this with precision. An attempt was made at bronchoscopy, but the bronchoscopist complained that he was unable to insert a bronchoscope because of the large caliber of those available. I find this remark quite surprising in that in performing a bronchoscopy, unless it is under extreme duress, one has the proper size bronchoscopes available before starting the procedure. One does not begin and then find that the instruments are improper.

"At any rate, another possibility is herniation through the diaphragm or eventration of the diaphragm. Eventration is an absence of muscular portion of the diaphragm so that the epithelium of the thorax and of the peritoneum are closely opposed and there is no muscle in the diaphragm. However, in these cases there is frequently an extremely high position of what is thought to be the remnant of the diaphragm. Posterior herniation of the diaphragm as a possibility would be a defect as the Bochdalch type. This would appear to be the case here if this is the deformity, and certainly it is possible to herniate the spleen or other abdominal viscera through such a herniation. However, it would seem to me that from the appear-

ance of the film it was not a massive herniation, if that is what it is, and that we would have to explain the respiratory insufficiency and cyanosis on some other basis. There are a variety of other tumors which can occur—soft tissue tumors can occur in this area, but these are so rare.

"So we then come to the anomaly of the heart. What anomalies are so severe as to cause a rapid demise and the appearance of cyanosis so shortly after birth? On a percentage basis and from the appearance of the x-rays I would think that perhaps the tetrology of Fallot would be the best possibility. Perhaps Dr. Watson would like to say a few words on that score a little bit later. It would be nice to bring these anomalies together under one unifying concept and that is one involving the cardiovascular tree in terms of cardiac anomaly, angiomata, and perhaps a vascular malformation in the lower left chest. However, I am afraid that I shall have to make my diagnosis on three separate scores, that is, multiple congenital anomalies appearing in the same infant and probably almost undoubtedly it would be cardiac anomaly leading to rapid demise and death. If I had to guess about the anomaly of the mass in the lower left chest, I would be in favor of a pulmonary sequestration."

PATHOLOGIC FINDINGS

Dr. Brunson: "We have with us today Dr. Herbert Braunstein, who has visited with us on a couple of other occasions. He will discuss with you the pathologic findings."

Dr. Herbert Braunstein: "This child did manifest a rather large hemangioma externally. It was described as 3 cm. in diameter on the forehead, and there was one on the right upper eyelid as well. The fact that is was clearly visible at the time of autopsy would suggest to me that it was really a hemangioma and not just the ordinary type of birthmark that we commonly see in newborn infants because those usually will fade postmortem. The child was a full term, well-developed Indian infant and the major findings were restricted to the thoracic cavity. The heart was enlarged and showed dilatation of both atria and both ventricles. There were two cardiac anomalies which were relatively minor in nature. There was a small patency of the foramen ovale, and there was a rather small patent ductus arteriosus which was described as measuring 3 mm. in diameter. I believe neither of these anomalies in themselves would have been responsible for the respiratory manifestations and cyanosis that the child exhibited. However, when complicated by other diseases, especially pulmonary disease, we would expect the manifestations to be more severe in the presence of these anomalies than in their absence. The lungs were partially consolidated with scattered areas of hemorrhage measuring up to 1 cm. in diameter and revealed diminished crepitation throughout.

"In the left lower chest there was found a multi-cystic mass which occupied approximately one quarter of the thoracic cavity and was attached to the diaphragm by numerous fibrous strands. This structure was definitely delineated from the lower lobe of the left lung. Both lungs were otherwise normally formed. The prosector observed a rather interesting finding: a large blood vessel emerged from the aorta just above the level of the diaphragm and apparently supplied this mass. However, he did not demonstrate the venous drainage of this mass. This was unfortunate since the information would have been quite helpful to us in delineating its nature. There were no pulmonary arterial or bronchial communications with the mass. In other viscera, there were focal areas of hemorrhage.

"In the lesion that was encountered in the lung, we found the alveoli filled with an exudate which was quite hemorrhagic in quality. However, at the periphery of the hemorrhagic exudate the exudate became proteinaceous. The alveoli were filled with a granular eosinophilic material, and there was a scattering of cells within this proteinaceous exudate. There was thickening of the alveolar septa. Even within this area one could demonstrate a cellular component. A higher power view through the most consolidated area showed the hemorrhagic quality of this exudate and the presence of a relatively small number of cells. Adjacent areas showed no intra-alveolar exudate whatsoever. I found numbers of neutrophils within the alveolar septa, and there were also neutrophils within alveolar spaces. It is my interpretation that this was a pneumonic process.

"We have gone through many phases in the interpretation of these hemorrhagic lesions of the lung. Some of you may be familiar with the work of Dr. Jacob Werner who many years ago pointed out that the cases of so-called "crib deaths" were usually not due to suffocation of the child but were associated with rather extensive hemorrhagic consolidation of the lungs. It was assumed at that time that these hemorrhages were related to some sort of infection and presumably represented some fulminating viral disease. We have now come through the full cycle so that this opinion is no

longer completely acceptable; the cause of intrapulmonary hemorrhage is presently considered to be rather questionable. In the present case, however, I think there is clear-cut evidence that it is a pneumonic process. I think we have to insist that the degree of neutrophilic reaction and the degrees of serous or fibrinous or other exudate be disproportionate to the erythrocytic infiltrate within the lungs to take it out of the class of pulmonary hemorrhage and place it in the category of a hemorrhagic pneumonia. Many organisms may cause a hemorrhagic pneumonia; for example, streptococcus. We do not have any cultures on this lung nor do we have blood cultures. Therefore we do not know what the organism was. However, from the quality of the exudate I would suspect that this was a bacterial process.

NEONATAL PNEUMONIA

"The actual cause of such lesions is uncertain. Why a child will contact pneumonia, apparently a fetal pneumonia and in this instance probably neonatal rather than fetal, is something that is highly problematic. In most cases we do not know the cause. In many instances of fetal pneumonia there is a history of premature rupture of the membranes. Presumably the infection enters through the amniotic fluid and is aspirated into the lung by the child after contamination following rupture of the membranes. In this case we do not have any adequate history concerning this and so we do not know what precipitated the lesion.

"A section taken from the mass below the left lung showed a lesion typical of pulmonary sequestration. This sequested lung exists in several forms. The most common variety is the intralobar type, enclosed within the pleura of the lobe affected. Most commonly the left lower lobe is involved although there is not the predominance that we encountered in the variety of sequestration represented by the present case which obviously is of the extrapulmonary type. It formed a separate mass which was distinct from the lung. The features were characteristic. It consisted of multiple cystic spaces lined by what was obviously bronchial epithelium and containing the many thick-walled and sclerotic vessels. In some areas there was actually formation of pulmonary tissue probably of alveolar ductal level, and I felt that there was pulmonary parenchyma extending to alveolar ductal levels.

PULMONARY SEQUESTATION

"Now I would like briefly to review pulmonary sequestration. This is an anomaly that may be detected in the neonatal period or may present in adult life. In the extralobar type that we have described there is a separate mass which is composed of abnormal pulmonary tissue which is often attached to the hilus or to some central structure. There is no bronchial communication with the mass and an artery, usually emerging from the aorta or one of the vessels within the abdomen, supplies the lesion. The classical finding however, is the presence of a venous drainage usually to the azygos or one of the abdominal veins. This was not demonstrated in the present case but the prosector did not feel that he was able to perform an adequate dissection of the veins, and I think we can assume that the venous drainage was abnormal.

"The intralobar pulmonary sequestration consists of a mass which is actually completely encompassed by the lobe of the lung in which it occurs. It is not an extreme rarity. The radiologist suggests and makes this diagnosis quite frequently, and it is not an uncommon experience for any thoracic surgeon to have removed one of these lesions. Even though in the medical literature it is implied that there have been only a small number of cases reported, I should like to point out that what is recorded in the literature does not necessarily constitute all the cases that are encountered. Now the lesion has become relatively common-place in medical experience, cases are perhaps not being reported. This variety of sequestration is composed of a segment of lung without bronchial supply and presumably without pulmonary arterial supply which is supplied by an anomalous bronchial artery. The venous drainage in these cases, however, is normal so that this variety is ordinarily distinguished from the extralobar sequestration by having a normal pulmonary venous drainage.

PATHOLOGIST'S DIAGNOSIS

"In essence then, the present case is a case of extralobar pulmonary sequestration and a hemorrhagic pneumonia of the lungs. I don't think that the cardiac anomaly was responsible for most of the findings. It seems to be a relatively minor one. I would agree with the cardiologic interpretation that probably the cardiac findings were related to the pulmonary disease rather than to the intrinsic

cardiac disease. Dr. Brunson, do you want me to review these diagnoses made by the students?"

Dr. Brunson: "Yes, if you wish."

STUDENTS' DIAGNOSES

Dr. Braunstein: "I don't know whether the students had prior information about this case. It seems to me that the juniors might have, but I don't think the seniors did. Certainly we expect the seniors to be a little bit better diagnosticians than the juniors, but for some reason more of the juniors seemed to have made this diagnosis. Twenty-three of the juniors suggested the diagnosis of sequestered lobe of the left lung but only seven of the seniors. More of the seniors voted for diaphragmatic hernia which I understand was thought to be the more likely diagnosis clinically at the time the child was studied. However, a substantial number of the individuals did suggest a diaphragmatic hernia among the junior group.

"I see several diagnoses here which are probably closely related—for example congenital pulmonary cysts. This type of cystic disease is what we see in sequestered lungs. Classically, sequestered lungs do show a multicystic appearance and probably the vast majority of cases of so-called congenital cystic disease of the lung fall in the category of sequestered lung. I think cystic disease of a normal lung is a relatively rare phenomenon. Both pathologists and radiologists frequently use the term cystic disease but don't mean it in the sense of a congenital anomaly. We mean by this a process of emphysema rather than true cystic disease. I think a large proportion of cases of cystic disease are actually sequestered lungs, and I assume that this was the intention of those who suggested this diagnosis. Some who suggested pulmonary cystic disease had suggested mucoviscidosis. This is using the term cystic disease as we more commonly use it—that is as a result of a development of an acquired process related to inflammation or some other damage to the lung producing a cystic structure. So that the juniors at least seemed to be relatively successful in making this diagnosis. I assume that none of the 23 were present at the autopsy."

Dr. Brunson: "Dr. Lowicki, do you have any comments?"

Dr. Lowicki: "With my misreading of the presence of cyanosis I fell in with the group of seniors rather than juniors. However, I would like to ask two questions. One, I could find no reported case of hookworms crossing the maternal placental barrier into the fetus, and I wonder if this has ever been a possibility. The second question is what was the extent of the hemorrhagic findings in the lung?"

Dr. Braunstein: "I don't think that hookworm could account for this picture. I have not heard of such. I assume that it could occur but I don't think it could account for what we saw in this particular case. The type of inflammatory exudate would indicate a probable bacterial infection. Now there were about four sections of lung on this case taken and every one of them showed pretty much the same process which ordinarily involved at least about 50 per cent of each section. I would think that the process in the lung was quite extensive. The actual weight of the lung is not recorded so I can't comment on how much the lungs were increased in weight although they were stated to be heavy. The sections did seem to indicate that this hemorrhagic process was quite an extensive one."

Physician: "I ask this question primarily in terms of therapy. In the x-rays the mediastinum was shifted to the right but the pulmonary findings at least on x-ray did not seem to be extraordinarily abnormal. Had bronchoscopy been successful might not this have made a difference in the outcome? There is a possibility of the use of acidol acystine as advocated by Dr. Watts Webb. Perhaps this might have encouraged the evacuation of what was obviously a flooding and drowning effect on the lungs."

CARDIAC ANOMALIES

Dr. David G. Watson: "I would like to make two comments. One, I prefer not to call a patent foramen ovale and a ductus at four days of age an abnormality, although functionally the ductus closes at 48 hours of age and anatomically stays open for an average of about 2 days. Then the patent foramen ovale is open in 20-25 per cent of us anyway and one would be surprised if it were closed. The other question is: I don't understand how the pathologic findings relate with the x-rays. I just don't see why we have a shift of the heart and mediastinum to the right and a high diaphragm on the left in this case. It don't make much sense to me."

Dr. Braunstein: "The ductus measured 3 mm. in diameter. I think this is quite a good size patency of a ductus for this age. I think the chances are fairly good that this ductus would have stayed open for an abnormally long time. As far as the foramen ovale is concerned, it is true that we do see this. However, it does have certain pathological implications, for example the problem of para-

doxical embolism or the problem of reversal of the ordinary flow of blood in cases where pressure relationships within the cardiac chambers become reversed. In this case, where we had a pneumonic process going on in the lungs these lesions might have assumed some significance. If there were nothing wrong with the lungs, I would assume that the cardiac anomalies wouldn't have harmed the child. I don't know how to answer your other question. Is it possible from the radiologic standpoint that the mass in the left chest could have been responsible for the mediastinal shift? The mass is said to occupy a quarter of the left chest cavity, but would this in itself have been enough to push the mediastinum over to the right side? I have no way of explaining the appearance of a high diaphragm. That is a total mystery to me."

Dr. Sloan: "I don't think I can answer the question with any assurance. I suspect the high diaphragm had as much as any single thing to do with the shift of the mediastinum."

Dr. Braunstein: "Another puzzling aspect of this whole business of the sequestered lung is how the air gets in there. Every time you see one of these lesions there is unequivocal alveolar expansion and in our case there are cysts which we described as containing fluid. As you look at the alveolar ducts adjacent to the bronchial lined cysts there is obviously a certain degree of expansion. This has always been an enigma to me. In the cases of intralobar sequestered lung that I have seen the explanation, of course, is that the air gets in there through the pores of Cohn but this doesn't explain an extralobar sequestration. We might conclude that perhaps the lungs secrete air as well as handling air that is taken in, but I don't have a really plausible explanation for it." ★★★

2500 North State St.

PASSING THE BUCK

With modern medicine doing so well at increasing life expectancy, congressmen better be careful about adding to the national debt. They might have to pay it off themselves instead of passing it along.

JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION

Volume VI, Number 10

October 1965

EDITORIALS

Rising VD: The Black Ages Revisited

I

Fourteen Americans will contract a venereal disease while you read this editorial. So great is the upsurge in VD incidence that the biostatisticians now know that 1.1 million individuals in the United States will be infected with syphilis or gonorrhea this year. That's 3,000 a day or almost two a minute. This national tragedy can be attributed only to moral standards which are, at best, relaxed and at worst, deteriorating. Ignorance among young people most assuredly accounts for some of the rise, and a host of brand new factors appear to be exerting influences in the intensification of this medical and social problem.

The American Medical Association has announced an education campaign working through state associations, local medical societies, hospitals, schools, and government health agencies. Those in public health will welcome this support, and they will need it, too, for the magnitude of this onslaught is of the most grave proportion. In just five years, syphilis in the under 20 age group has increased 200 per cent. Major urban areas are experiencing a rise in VD incidents ranging from 200 to 800 per cent over a four year span.

That we have had a reliable, accessible, and inexpensive cure for VD since 1943 seems to be for nothing. Studies show that many young people, once infected, are complacent about treatment and abysmally indifferent to the inevitable sequelae.

II

Control of venereal disease is becoming more difficult for a variety of reasons, despite the ease and success with which treatment can be undertaken. Obviously, there is public apathy and reluctance to face up to the problem that a nation able to photograph Mars can at the same time be sinking into the black ages of social disease. Young people are apparently not sufficiently aware of the dangers of promiscuous behavior, and parents aren't doing their job of informing their children. Many schools still feel that VD education isn't a fit subject for inclusion in the curriculum.

Without doubt, the increasing use of alcohol—especially among young people—is contributing to the rise in sexual promiscuity. And while the incidence of homosexualism is a distressing social problem in itself, it is not altogether divorced from the rise of venereal disease: An increasing number of venereal infections are being traced to homosexual contacts.

It is difficult to take exception to AMA's assertion that this is a serious reflection on present social attitudes. It is obviously much more than a medical problem, because the physician can't heal a sick society, only society's specific sicknesses which yield to his scientific skills and armamentarium. The mounting pattern of urbanization and even the jet airplane come in for shares of the blame. International travel moves at a pace so rapid that the world can be transversed half a dozen times before some VD symptoms manifest themselves.

III

The American Medical Association has begun its education campaign on a note of pessimism: "Frankly," it says, "the immediate outlook for

controlling VD is not encouraging. Venereal diseases have a tremendous head start on medical treatment. The American Medical Association believes, however, that Americans will want to cooperate to destroy this great danger to their health and the health of their children."

But let's put it on a somewhat less ideal basis and recognize with equal candor that if we fail in the fight against VD, our victories over other diseases of lower incident, however dramatic these victories may be, will add up to little if the venereal cripplers and killers are permitted to run rampant. In one sense, the might of medicine would have been straining at a gnat and swallowing a camel if we hesitate in giving our best to the solution of the problem.

Physicians have a unique opportunity to fulfill an important role of leadership in the eventual control of venereal disease, because they can bring with authority and impact the cold, hard facts before a complacent society. Many, many others must also be willing to assist, and almost no segment of American life is exempt from either responsibility or duty in this challenge.—W.M.D.

Necrology For Necropsy?

The autopsy, as a major entity in medical teaching and research, has fallen upon evil days and hard times. So say six authors in a recent *JAMA* article, claiming that the thousands of autopsies done each year no longer occupy the central place in medicine that they once did. For one thing, vastly improved diagnostic technique for the living may have changed the basic question at autopsy from "why" to "how."

Is the procedure, then, merely a relic of the past? Indeed not, the authors retort, but its purpose and application must take into account the giant strides in medical progress and the shift of emphasis in teaching and research. In a nutshell, many medical authorities are questioning the need for the number of post mortem examinations now being done.

Independently of this thinking, some Mississippi pathologists have recently voiced concern over the autopsy rate requirements imposed by the Joint Commission on Accreditation of Hospitals. Although not formally reduced to percentage absolutes in the accreditation criteria, JCAH inspectors generally expect the records to yield up a generous 20 per cent rate. In a major teaching hospital, this may be unrealistically low, while in the small general medical and surgical short term hospital, it is an untenable demand. There simply aren't enough pathologists to take on the tasks implied in maintaining this rate.

The editors of *JAMA* offer two suggestions for resolving the problem: First, restore the procedure to greater usefulness by re-emphasizing the need for careful, detailed investigation. This may mean reducing the number of autopsies performed.

Second, restore the procedure to its rightful place as a teaching instrument. In summary, it is said, the goal must be selection of cases which furnish the most useful information. These reasonable contentions deserve the careful and thoughtful attention of every physician and his full recognition of the need for the whole of medicine to forge ahead.—W.M.D.

The Culprit Pays

Our neighbor to the east, Alabama, has been busy revising and updating its state health agency organization, and not the least of this legislative effort is a new and possibly unique source of state funds. Focusing attention on its public and state mental health programs, the Alabama legislature created a new Department of Mental Health with a 13 member board of trustees. The action abol-



"He claims he caught it while reading 'Peyton Place.'"

ished separate governing boards for state mental hospitals and a hodge-podge of fragmented agencies in the state mental health picture.

New support was given the State Department of Public Health in greater appropriations through a new tax about which almost nobody can complain. The solons added a penny levy on each pack of cigarettes, estimating that $3 million in new monies will thereby be realized. Then they acted to dedicate every cent of the new fund's source to health activities, allocating 60 per cent of it to public health and 40 per cent to mental health. The measure passed both houses of the legislature without a dissenting vote.

To say the very least, it is refreshing to see a tax on tobacco turned over to health activities under local sponsorship and control. Even more interesting is the apparent attitude of the representatives and senators toward the health hazards of tobacco use in their unanimous expression.—R.B.K.

DEATHS

HOOD, JAMES MATTHEW, Houlka. M.D., University of Tennessee College of Medicine, Memphis, 1914; member, Southern Medical Association; Emeritus member of MSMA; died Aug. 17, 1965, aged 78.

MANGOLD, KONRAD PAUL, Yazoo City, M.D., University of Vienna, Austria, 1932; internship, St. Clare's Hospital, New York City, N. Y., one year; died Aug. 1, 1965, aged 64.

MOORE, ROBERT MAXWELL, Vicksburg. M.D., University of Tennessee College of Medicine, Memphis, 1931; interned Baptist Memorial Hospital, Memphis, Tenn., one year; assistant resident, pathology, Memphis General Hospital, Tenn., one year; pathology residency, Memphis General Hospital, Tenn., one year; instructor, pathology, University of Tennessee College of Medicine, Memphis, three years; assistant professor of pathology, University of Missouri School of Medicine, Columbia, two years; professor of pathology and clinical laboratory diagnosis, University of Mississippi School of Medicine, Jackson, eight years; acting professor of bacteriology, University of Mississippi School of Medicine, Jackson, three years; pathologist and director, Clinical Laboratory, Vicksburg Hospital, Miss.; Fellow in the College of American Pathologists; member, Mississippi Association of Pathologists and the Mississippi Society of Clinical Pathologists; Diplomate of the American Board of Pathology; died Aug. 5, 1965, aged 59.

WHITE, DAVID DEWIT, Shelby. M.D., Tulane University School of Medicine, New Orleans, La., 1908; died Aug. 27, 1965, aged 81.

NEW MEMBERS

The following physician has been elected to membership by his respective component medical society in the Mississippi State Medical Association and the American Medical Association:

MOORE, STEVEN LAVELLE, Jackson. Born Jackson, Miss., July 4, 1931; M.D., University of Mississippi School of Medicine, Jackson, 1957; interned Arkansas Baptist Hospital, Little Rock, one year; elected July 6, 1965, by Central Medical Society.

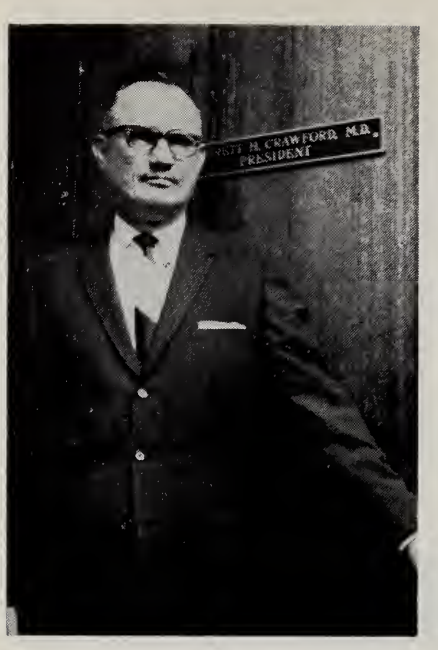
PERSONALS

RICHARD G. BURMAN has been elected chief of the medical staff of Memorial Hospital at Gulfport. Other officers are WILLIAM D. ATCHISON, vice chief of staff, and BEN J. KITCHINGS, secretary-treasurer.

KENNETH M. HEARD of Jackson has announced the opening of his office for the practice of pathology at 838 Lakeland Drive.

W. L. MCFARLAND, J. B. LEVENS, JR., and M. L. DODSON of Bay St. Louis and Waveland have announced the association of HENRY A. MAGGIO.

CHARLES H. MARTIN has joined the staff of the Natchez Medical Clinic.



The President Speaking

'Play For Fun'

EVERETT CRAWFORD, M.D.
Tylertown, Mississippi

PRESSURES EXERTED upon some young athletes by parents, coaches, and others have, in effect, irreverently revised Grantland Rice's immortal lines to reflect a trend of the day:

For when the One Great Scorer
Comes to write against your name,
He writes not of your sportsmanship
But if you won the game.

Deep concern over the plight of some pre-varsity athletes culminated in the Cincinnati Academy of Medicine appointing a special committee who reported its findings and condemnation of youngsters' "being pressured into regimented league competition for the purpose of winning athletic events to glorify themselves, their parents, coaches, and sponsors."

The Academy's committee roundly attacked the practice of some coaches who play the big boys, squeezing them to win at the expense of their teammates' sitting out the competition on the bench. The idea, the committee contends, is to let *all* the boys play for the *fun* of the sport while building character, fitness, and a wholesome team spirit. The report deplores adding pressures upon children already under stress to succeed academically so that they may qualify for college.

AMA's Committee on Medical Aspects of Sports has underscored the importance of close cooperation among parents, coaches, school administrators, and physicians in assuring the well-being of the young, budding athlete. The doctor is closer to this relationship than he may realize, because he not only examines the youngster for fitness but he also counsels others who have an interest and concern in the child. In the interest of his athlete-patient, the doctor has the duty and obligation to speak up when he finds that the win-squeeze is detrimental.

Team sport is a must for our children, but it must never force upon them stresses, injury, and displacement from normal, healthy activity so important to their formative years. ★★★

Book Reviews

A Synopsis of Contemporary Psychiatry. By George A. Ulett, M.D., Ph.D., Professor of Psychiatry, Missouri Institute of Psychiatry, St. Louis, Mo., and D. Wells Goodrich, M.D., Chief, Child Research Board, National Institute of Mental Health, Bethesda, Md. 299 pages with illustrations. St. Louis: The C. V. Mosby Company, 1965. $6.75.

It was the authors' intention in the original edition to write a brief introductory reference textbook of psychiatry for nurses, medical students, residents, and general practitioners, keeping theory to a minimum and maintaining an eclectic approach. In this, the third edition of "Synopsis of Contemporary Psychiatry," the authors continue their original purpose by revising one of the best "side pocket" references in psychiatry for the busy nonpsychiatric resident and physician. Armed with this succinct and precise diagnostic, clinical, and therapeutic information, the physician may take courage in his ability to diagnose many and treat some of the psychiatric problems of the patients who come through his office or hospital.

Chapters 3 through 7 again offer in just 22 pages the kind of approach and hints to obtain the necessary information from a psychiatric and neurological examination of the patient. The seven chapters of Part Two present a synopsis of the psychiatric disorders delineated into clear-cut entities and in the form and terms of the Standard Nomenclature of Diseases and Operations for easy reference. A brief but directive approach of treatment is presented in each section.

Part Three on Therapeutic Measures is a general survey. Chapter 23 on chemotherapeutic agents will probably be the most welcome chapter in the book in that it contains in a well-organized fashion a remarkably good survey of pharmacological agents with dosage range, side effects, and precautions. The chapters on suicidal patients, forensic psychiatry, and mental health should be read by all medical personnel. The references and suggested readings have been updated.

The only critical comment (and a small one) is that some therapeutic measures such as psychosurgery, carbon dioxide therapy, continuous sleep and hydrotherapeutic baths, and douches have probably out-worn their usage for inclusion in such a text.

This book is extremely well written and deserves a place on the bookshelf of the busy nonpsychiatric practitioner and in the coat pocket of the senior student, intern, and resident. I believe it would be well worn by the time the next edition appears.

JAMES F. SUESS, M.D.

External Otitis: Diagnosis and Treatment. By Edley H. Jones, M.D. 245 pages with illustrations. Springfield: Charles C Thomas, 1965. $9.50.

This valuable book is organized into five parts: basic, investigative, pictorial with color atlas and classification, clinical diagnosis and treatment of external otitis, as well as pathogenesis and prophylaxis. These five parts divide the 22 chapters of the book in a logical order. The discussion begins with the definition of external otitis followed by a review of the pertinent microanatomy and physiology. Many well-prepared microphotographs illustrate the statements that are clearly formulated. The author's original contributions to the pathology and treatment of external otitis have been discussed in the subsequent chapters. The experimental method is clearly described, detailed findings regarding the chemical characteristics of the external ear canal (pH) are discussed, and the conclusions illustrate the bactericidal effects of weak acetic acid solutions. The experimental results clearly demonstrate the value of various medications as recommended by the author. He proceeds to the analysis of bacteria found in the normal ear canals and compares these findings with bacteriological studies in cases of external otitis. The problem of aural fungus infections and the value of fungicides are the subject of another large chapter.

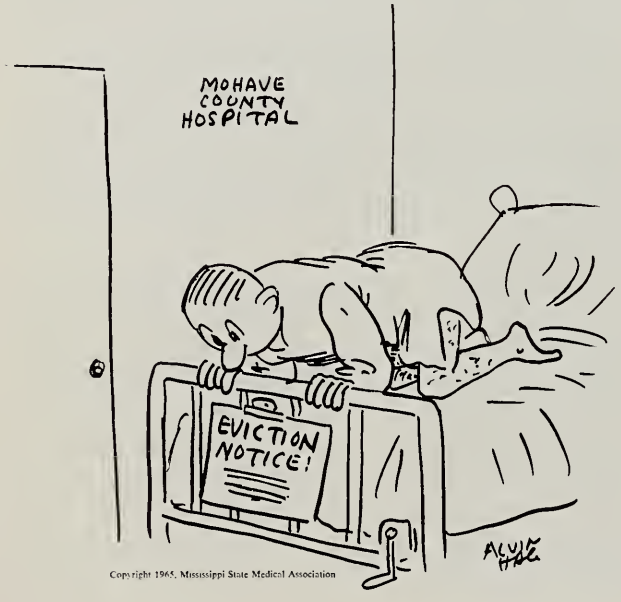
The practical considerations are always in the foreground, sometimes expressed in the summaries of the various chapters, while at other times an entire chapter is devoted to them, such as the one intitled *Prevention of Swimming Pool Ear*. This practical clinical orientation does not belittle the author's thorough knowledge of the basic pathology. In his discussion of the micropathology of external otitis, he compares his histological findings with clinical observations. The

definition of terms is highly illustrative which helps to clarify various misconceptions that are still frequent among practitioners. Typical cases from daily practice have been studied from these various aspects, biopsy specimens revealing the nature of the morbid process. Each clinical disease entity is carefully reviewed, illustrated by clear microphotographs, and the treatment is corroborated by bacteriological studies. The color atlas represents one of the highlights of the book. Most of the illustrations are beautifully reproduced, showing the author's demonstration with vivid clarity.

The author proposes a simple etiologic classification of external otitis on which he bases his final remarks concerning the clinical diagnosis and treatment of this condition. The necessary instruments, techniques, medications, and therapeutic recommendations are discussed clearly and with great detail. It is refreshing to read the author's personal experiences with the numerous ear drops of varying type. A chapter on traumatic external otitis includes various related conditions caused by excessive cerumen, foreign bodies, chemical burns, trauma from scratching or injury. Infectious and allergic external otitis and several other specific and nonspecific forms of external otitis lead to a retrospective summary of the pathogenesis and prevention of external otitis.

The book is well documented by 41 specifically discussed references and is concluded by a well-oriented index. In view of its great value to daily practice and the reliable guidance in the management of the frequent, painful, and potentially dangerous external ear infections this book can be highly recommended to all general practitioners, otolaryngologists, pediatricians, and dermatologists. It may very well become a classic in modern otologic literature.

GODFREY E. ARNOLD



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State Morbidity Reported Through August 27

The Mississippi State Board of Health reports the following occurrence of morbidity for 1965 through the 35th week of the year, ending Aug. 27, 1965. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul.	969
Tuberculosis, O.F.	27
Typhoid fever	4
Encephalitis, infectious	16
Toxoplasmosis	1
Septicemia, Staph.	9
Dysentery	
Bacillary	34
Amoebic	1
Dysentery, NOS	9
Leptospirosis	1
Meningococcal infections	26
Diphtheria	1
Mononucleosis, infectious	36
Hepatitis, infectious	206
Hepatitis, serum	1
Tetanus	3
Helminthic infections	
Hookworm	756
Ascariasis	278
Strongyloides	46
Meningitis, O.F.	29
Histoplasmosis	10
Other Cestode Infestations	6
Salmonella Inf.	20
Gastro-enteritis	2
Streptococcus infections	
Scarlet fever	29
Strep throat	1,406
Pertussis	13
Measles	1,437
Chickenpox	252
Mumps	352
Vaccinia, smallpox	1
Influenza	5,891
Gonorrhea	3,078
Syphilis	
Early	491
Late	85

MSMA Launches Membership Program; Goal Is Increase of 100 by January 1966

A program to encourage component medical societies to invite every qualified, eligible physician into local, state, and AMA membership for 1966 has been initiated. This was the announcement of Dr. James T. Thompson of Moss Point, president-elect of the state medical association.



Dr. Thompson

Dr. Thompson presented details of the campaign at the recent two day meeting of the Board of Trustees where he called on each member to assist in strengthening the profession in Mississippi. Under the by-laws, the president-elect is charged with "the work of organization, including membership, under the direction of the president, and shall exercise these duties and advise with the vice presidents and with the Board of Trustees. . . ."

Leading the effort regionally will be the three vice presidents, Dr. Thompson said. They are Drs. John G. Egger of Drew, northern area; Arthur A. Derrick, Jr., of Durant, midstate area; and Archie C. Hewes of Gulfport, southern area. Each vice president will coordinate and assist membership activities of his respective three association districts and the component medical societies in each.

Pointing to the steady, progressive growth of the association, Dr. Thompson said that membership had increased from 855 in 1951, the first year during which AMA dues were levied, to 1,392 in 1964, a gain of about 64 per cent over a decade and a half.

"Our potential, however, is much greater," the president-elect added, "because there are over 1,700 physicians in Mississippi today. The *1965 Directory of Physicians* published by the association shows 457 physicians in Hinds County alone, a substantial indicator of medicine's growth in the state."

To help local societies in the 1966 membership program, Dr. Thompson said that special listings of members and nonmember physicians had been furnished to component organization secretaries, Trustees, and to the three vice presidents. He stressed, however, that the association's strict qualifying criteria required of all applicants would be fully and impartially applied. Moreover, each local society is the judge of all candidates for election within its professional jurisdiction, he said.

To be elected an active member, a physician-applicant must be a citizen of the United States, a graduate of an AMA-approved medical school, and licensed to practice in Mississippi. Additionally, he must possess a currently effective federal narcotics stamp unless by reason of type of practice, employment, inactivity, or retirement, he is exempt from this requirement. An applicant must never have been convicted of or plead guilty to a felony or a violation of a narcotics law.

Although 46 of the 54 state and territorial medical associations raised dues at least once between 1956 and 1964, Mississippi state dues remain unchanged at $50 per year. Dr. Thompson said that studies showed that Mississippi physicians are in the low 40 per cent of state dues brackets nationally, since 60 per cent of all American physicians pay annual state levies of $55 to $120 per year. AMA dues of $45 are in addition to state dues and are mandatory under the association's by-laws.

Dues for 1966 are payable on or before December 31, 1965. The president-elect is urging members "to help their respective local society secretaries by voluntary sending checks for local, state, and AMA dues now." The goal of the new program is an increase of 100 members by January of 1966, Dr. Thompson concluded.

Urge Tightening of Indigent Care Policies

Acting to implement new policies on medical care for the indigent approved by the state association's House of Delegates at the 97th Annual Session last May, Dr. Everett Crawford, the president, has formally communicated five recommendations to the State Hospital Commission and the Mississippi Hospital Association. Implementation of the policy was ordered by the Board of Trustees.

The State Hospital Commission, under whose program a physician is statutorily barred from charging or receiving fees for services to the indigent, was asked "to amend its regulations to assure every licensed physician in Mississippi that he is free to participate in the program or not, according to his personal inclination and contingent upon his enjoyment of staff privileges in the participating hospital. . . ."

The Mississippi Hospital Association was asked to encourage member institutions to ascertain if applicants for admission under the commission program of care for the indigent possessed voluntary prepayment or health insurance, and where at all possible, admit these patients only on private service.

The communication to the commission also asked that the state medical association be consulted in connection with regulatory policy and administrative procedures of the program "recognizing that professional services are gratuitously provided and that participating physicians have a deep and abiding interest in the wellbeing of these patients." Dr. Crawford also asked the commission, in the interest of tax dollar conservation, to cause the exercise of all reasonable effort to apply the statutory means test realistically to the end that only genuinely indigent patients receive benefits of the program.

Both the commission and hospital association were asked to act jointly to minimize the transfer of patients from private to indigent care status and then only when appropriate welfare department investigation has been conducted and a report furnished to all concerned, including the attending physician.

The policy grew out of a landmark study conducted last year by the Board of Trustees on all programs of medical care for the indigent. The study was authorized by the House of Delegates who received the proposal in a resolution introduced by the Coast Counties Medical Society. The state association representatives on the MSMA-Mississippi Hospital Association Liaison Committee, Drs. James T. Thompson of Moss Point, president-elect, Guy T. Vise of Meridian, chairman of the Council on Medical Service, and Dr. Crawford, the president, will continue to consult the hospital association and State Hospital Commission over the policy implementation.

AMA Plans 19th Clinical Meet

A comprehensive scientific program, a new postgraduate course, and special clinical workshops are some of the features of the American Medical Association's 19th Clinical Convention, Nov. 28-Dec. 1, in Philadelphia.

More than 300 physicians will participate in giving the four-day program of lectures, exhibits, motion pictures, color television, fireside conferences, and breakfast roundtables.

An outstanding scientific program is designed to hold special interest for the practitioner. Some topics to be covered: ulcerative colitis, gram-negative bacterial infections, a medical-surgical review of cardiovascular surgery, drug therapy in



"We managed to get another patient in Ward 20."

rheumatology, and cancer chemotherapy and preventive surgery.

The practicing physician will be able to participate in one of the convention's new features. Clinical workshops on diabetes, examination of the heart, management of common eye problems, and the solution of selected diagnostic and therapeutic problems will be conducted by outstanding teachers.

Also new will be a postgraduate course in cardiovascular therapeutics. It will be offered in addition to the popular course on gynecology and obstetrics begun at the clinical convention last year in Miami.

The annual AMA conference on the Medical Aspects of Sports will be held the first day of the meeting, Nov. 28, in the Benjamin Franklin Hotel. It will be of special interest to high school and college team physicians. There will be approximately 100 scientific exhibits, and 30 medical motion pictures.

Color television will be presented on the stage of the Civic Center in cooperation with the Hospital of the University of Pennsylvania. The subjects of six programs, to be followed by discussion, are "Lymphocytes, Cellular Immunities and Tissue Transplantation," "Renal Hypertension," "Pulmonary Resection," "Pulmonary Function Studies," "Surgical Aspects of Thyroid Diseases," and "Medical Aspects of Thyroid Diseases."

Twelve fireside conferences will be held Sunday evening, Nov. 28, at the Warwick Hotel. They will be joint sessions of the American College of Chest Physicians and the AMA.

Dr. W. Emory Burnett is general chairman of the meeting. Dr. Donald A. Dupler is chairman of the scientific program committee.

Industrial Medical Group Announces Contest

A competition for a $250 award for the best manuscript submitted by a medical student, intern or resident on any subject pertinent to and concerning occupational health has been announced by the Central States Society of Industrial Medicine and Surgery. The contest closes at midnight on Dec. 31, 1965.

A second competition, open only to residents in occupational medicine, is announced by the Industrial Medical Association. The award, consisting of an embossed scroll, will be presented at the association's annual meeting to the author or authors of a paper published in the open literature on a subject germane to occupational medicine which is judged to be the most outstanding of those submitted. Reprints entered in the competition must be published during 1965 and submitted prior to Jan. 15, 1966.

Both contests will be judged by members of the Committee on Merit in Authorship of the Industrial Medical Association. The criteria will be largely based on clarity, validity, objectivity, originality and style. Complete contest rules may be obtained from: Industrial Medical Association, 55 East Washington St., Chicago, Ill. 60602.

ACS Announces 1966 Sectional Meets

The American College of Surgeons will hold the first of three 1966 sectional meetings in Bal Harbour, Fla., Jan. 13-15. More than 500 surgeons are expected to attend this scientific three-day program, open to all doctors of medicine. Headquarters will be the Americana Hotel.

The College's sectional meetings are short, concentrated programs designed to inform the medical profession at large about developments in surgery. Surgeons of outstanding ability serve as teachers, focusing attention on newer ways of handling problems encountered in day-to-day practice. Panels, symposia, "How-I-Do-It" clinics, papers, and films of special interest are presented.

Approximately 100 participants are listed on the program, which includes sessions in specialties of ophthalmic surgery and gynecology and obstetrics as well as in general surgery.

Among topics to be discussed are complications of steroid therapy, the battered adult, head and face trauma, difficult problems in biliary surgery, complications of gastric surgery, cerebral ischemia due to extra cranial vascular occlusion, pediatric ophthalmology, ophthalmic plastic surgery, the pelvic mass, techniques for hysterectomy, medications and other therapy during gastation, and congenital anomalies.

Other 1966 sectional meetings will be held in: Houston, Jan. 31-Feb. 2; Cleveland, March 14-17, the annual four-day meeting for graduate nurses and surgeons.

Dr. Robert J. Kamish, assistant director, Chicago, is in charge of Sectional Meeting programs for the College. Official housing forms for these meetings may be obtained from T. E. McGinnis, American College of Surgeons, 55 East Erie St., Chicago, Ill. 60611.

MEETINGS

NATIONAL AND REGIONAL

American Medical Association, Clinical Convention, Nov. 28-Dec. 1, 1965, Philadelphia. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn, Chicago 10, Ill.

American College of Surgeons, Oct. 18-22, 1965, Atlantic City. John F. North, Director, 55 E. Erie, Chicago 11, Ill.

Southern Medical Association, Annual Meeting, Nov. 1-4, 1965, Houston, Texas. Mr. Robert F. Butts, Executive Director, 2601 Highland Ave., Birmingham, Ala.

STATE AND LOCAL

Mississippi State Medical Association, May 9-12, 1966, Jackson. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Mississippi Academy of General Practice, Oct. 13-14, 1965, Jackson. Louise Lacey, Executive Secretary, P.O. Box 1435, Jackson.

Amite-Wilkinson Counties Medical Society, Third Monday March, June, September, December. S. E. Field, Centreville, Secretary.

Central Medical Society, First Tuesday, January, March, May, September, November, December. 6:30 p.m., Robert E. Lee Hotel, Jackson. James R. Cavett, Jr., B-6, Medical Arts Building, Jackson, Secretary.

Claiborne County Medical Society, First Monday January and July, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Third Wednesday March and First Wednesday November, 2:00 p.m., Clarksdale. Robert L. Forman, Coahoma County Hospital, Clarksdale, Secretary.

Coast Counties Medical Society, Second Wednesday January and July, First Wednesday March, May, September, November. Charles D. Taylor, Jr., 113 Davis Ave., Pass Christian, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Quarterly, 7:30 p.m., Natchez Country Club, Natchez. W. T. Colbert, Natchez General Hospital, Natchez, Secretary.

North Central District Medical Society, Third Wednesday March, June, September, and December. William E. Riecken, Jr., P. O. Box 831, Kosciusko, Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo. S. Jay McDuffie, Nettleton, Secretary.

North Mississippi Medical Society, First Thursday, April and October, Oxford. John P. McLaurin, Jr., 613 South Lamar Blvd., Oxford, Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. Joseph C. Griffing, Lucius Olen Crosby Memorial Hospital, Picayune, Secretary.

South Central Mississippi Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. James C. Bass, Jr., 424-13th Ave., Laurel, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg. Patrick G. McLain, 1301 Washington St., Vicksburg, Secretary.

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION
JACKSON, MISSISSIPPI

November 1965

Dear Doctor:

The least publicized major medical policy meeting of the year is the White House Conference on Health, called by LBJ for Nov. 3-4. Apparent purpose is to shape new top priority health programs for 2nd Session of the 89th Congress, among which are "attacks" on infant mortality, TB, childhood diseases, and heart disease, cancer, and stroke.

> Participants in the conference have apparently been hand picked by White House staffers and conference officials. Neither the chairman nor vice chairman is a physician, and only five of the nine executive committee members are doctors.

The Louisiana State Medical Society has established a "Betsy Fund" to assist physicians who were wiped out by recent hurricane. Appeal is not being made to public, only to medical profession. Proceeds will help distressed doctors in rebuilding offices and homes. Gifts may be sent to LSMS headquarters in New Orleans.

Blue Shield membership in the United States hit a record high of 56.9 million through the first half of 1965. Increase during the January-to-June period was three-quarters of a million with 58 of the 85 Blue Shield plans reporting gains, two remaining constant, and 25 losing enrollees.

A proviso in H.R. 168 requiring the U.S. Attorney General to defend professional liability suits against the VA was deleted by the Senate. Bill relates to veterans compensation. Contrary to popular belief, patients can and do, on occasion, sue the VA. Defense protection will probably be provided by Congress in a separate law.

A 44-year old career Public Health Service officer, Dr. William H. Stewart, is the new Surgeon General of the United States. He is a graduate of LSU medical school and once practiced pediatrics at Alexandria, La. Chosen to succeed Dr. Luther Terry, Dr. Stewart joined USPHS in 1951.

Sincerely,

Rowland B. Kennedy
Executive Secretary

AMA-ERF

DATELINE - MEDICAL AMERICA

SBH Sets Fees For Mental Health Services

Jackson - The State Board of Health announced that fees are being charged for mental health services and that charges were put into effect on July 1. Purpose, said announcement, is to permit individuals able to pay to contribute to program and, as a secondary consideration, for the "therapeutic value" of fee payment as opposed to "charity." SBH stressed, however, that no individual will be denied services because of inability to pay and that there will be no distinction in type and quality of service to pay and nonpay patients.

Allergy Distress Is Costly

New York - The Allergy Foundation of America reports that as much as 10 per cent of the total population suffers some sort of allergy distress, ranging from mild seasonal hay fever to severe reactions. Costs in lost work time and impeded production, foundation continued, are estimated to be as much as $200 million annually.

Brown Co-eds Are Given Contraceptive Rx's

Providence, R.I. - Unmarried women students over age 21 at Brown University have received prescriptions for contraceptive pills from the school's health service director, according to a story in the Brown Daily Herald. The university physician was quoted as saying that he prescribed the pills "on his own" and that the number of girls receiving the pills was "very, very small."

Employers Are Not Liable For Health Care Of Retired

Washington - In a landmark decision, a federal appeals court held that employers cannot be made to contribute to a union-sponsored health care plan for retired workers. In a suit involving the Teamster's Medicare Trust for Retired Employees, the court held that the Taft-Hartley Act provides for employer contribution to trusts for retired employees' pensions but not for health care programs. Gist is that employer contribution liability for medical care is limited to current employees only. Citation is Local 688, International Brotherhood of Teamsters v. Townsend, 64 C 96 (1) (D.C., E.D., Mo., May 18, 1964).

NASA Space Gadgets Are Useful In Medicine

Washington - The National Aeronautics and Space Administration has published a new monograph on application in medical practice of space telemetry techniques developed for manned space flights. Biotelemetry has been used to record astronauts physiological reactions while in space. Interesting application is in intensive care of acutely ill. Publication is free to physicians on request.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
November 1965, Vol. VI, No. 11

ORIGINAL PAPERS

Genetic Principles in Medical Practice

JOHN F. JACKSON, M.D.
Jackson, Mississippi

THE SCIENCE OF GENETICS began 100 years ago, in 1865, with Gregor Mendel's observations on experiments in plant-hybridization.[1] After a lapse of almost 50 years, Mendelism was rediscovered in the early 1900's.

Garrod, a London pediatrician, began the study of biochemical genetics with his observations on alcaptonuria and other hereditary disorders in 1908. At the same time, the Hardy-Weinberg equation was derived by independent observations of G. H. Hardy, a mathematician, and Wilhelm Weinberg, a physician, leading to the study of population genetics. Later advances are exemplified by the awarding of five Nobel prizes in physiology and medicine to workers in the field of genetics: 1934, T. H. Morgan, for research on the nature of the gene; 1946, H. J. Muller, for discovery of the induction of mutation by x-ray; 1958, G. W. Beadle and E. L. Tatum, for biochemical genetics and J. Lederberg, for discovery of sexual recombination in bacteria; 1959, A. Kornberg and S. Ochoa, for chemical studies of DNA and RNA; and 1961, J. D. Watson, F. H. C. Crick, and M. H. F. Watkins, for determination of the structure of DNA.[2] In the past few years, great strides have also been made in human cytogenetics, the study of morphologic chromosomal abnormalities.[3] Mendel's observations still apply to all these areas.

From the Department of Preventive Medicine (Medical Genetics), University of Mississippi Medical Center.
Read before the Section on Internal Medicine, 97th Annual Session, Mississippi State Medical Association, Biloxi, May 10-13, 1965.

The principles of Mendelian genetics are directly applicable to inherited human diseases. In most instances, the pattern of inheritance is that of simple mathematical ratios. Knowledge of the mechanics of inheritance can be helpful to the practicing physician in arriving at a diagnosis in individual problems based on family history. Such information becomes a necessity in genetic counseling to provide a basis for the prediction of the expected incidence of inherited disease in future offspring. Several hereditary diseases which can cause gastrointestinal bleeding illustrate the basic mechanisms of inheritance.

MENDELIAN PRINCIPLES

Mendel termed those characters transmitted entirely or almost entirely unchanged to the next generation as dominant and those which became latent in the process as recessive. The individual inherits one chromosome of each pair from each parent. Each chromosome contains in exact linear order many genes, each gene governing one hereditary function. Genes at the same locus on the two chromosomes of a pair may determine different variations of the same basic function, and are termed alleles. Thus genes for variation of the same character can segregate independently in the germ cells (gametes). Genes at different loci

(nonalleles) also assort independently, except where the loci are so close on the same chromosome that this cannot regularly occur, termed linkage.

AUTOSOMAL DOMINANT DISEASE

An easy way to understand these principles is to illustrate them by practical application to specific medical problems. Gastrointestinal hemorrhage is a common problem in medical practice,



Figure 1. Hereditary Hemorrhagic Telangiectasia.

and there are some several causes which are inherited. Furthermore, some of these diseases are subject to diagnosis merely by recognition of typical skin manifestations. Hereditary hemorrhagic telangiectasia or Rendu-Osler-Weber disease is a vascular anomaly characterized clinically by hemorrhage, especially epistaxis, mucosal hemorrhage, and gastrointestinal hemorrhage from multiple dilatations of capillaries and venules observable in the skin and mucous membranes as telangiectases.[4] This disorder is not so rare as was once thought, and three affected individuals from unrelated families have come to our attention within the past year at the University of Mississippi Medical Center (Figure 1).

The Peutz-Jeghers syndrome is also a cause of bleeding from polyps which may involve any part of the gastrointestinal tract or exceptionally the bronchi, nose, or bladder.[5] In this case, the presence of gastrointestinal polyps is associated with a characteristic melanin pigmentation of the lips and mouth which is often the clue to the diagnosis. Familial multiple polyposis of the colon may also be a cause of gastrointestinal hemorrhage, and is of particular interest because of the increased risk of malignancy associated with the myriads of colonic polyps.[6] Gardner's syndrome is the association of premalignant gastrointestinal polyps with fibromas, fibrosarcomas, osteomas, and sebaceous cysts, which is also a cause for bleeding from polyps.[7]

All four of these causes for gastrointestinal hemorrhage, hereditary hemorrhagic telangiectasia, Peutz-Jeghers syndrome, familial multiple polyposis, and Gardner's syndrome are inherited by an autosomal dominant genetic mechanism. Autosomal refers to the fact that the gene locus is on one of the chromosomes other than the sex chromosomes, and dominant refers to the fact that the gene is required to be present on only one of the paired chromosomes in order for the condition to be manifest. Thus the disease is manifested in the heterozygous state, the term used when the two genes at the same locus on any given pair of chromosomes are different. The transmission of dominant genes is diagrammatically illustrated in Figure 2, showing the gene as an "X" on the chromosome. Since the ova or spermatozoa contain only one of each pair of chromosomes following the reduction division in meiosis, a parent can transmit only one chromosome of any given pair to each child. One can see that in the case of a dominant gene that each child would have a 50 per cent chance of inheriting the disease. Those

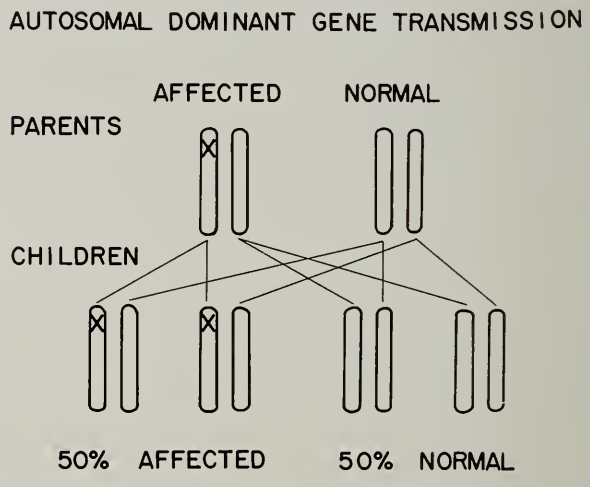


Figure 2. Autosomal Dominant Gene Transmission.

not receiving the gene would not have the disease, nor could they transmit it to future generations.

AUTOSOMAL RECESSIVE DISEASE

There are other causes for gastrointestinal hemorrhage which are inherited in a different pattern. Pseudoxanthoma elasticum is a disease featured by small elevated plaques in the flexural creases, originally because of their yellow color

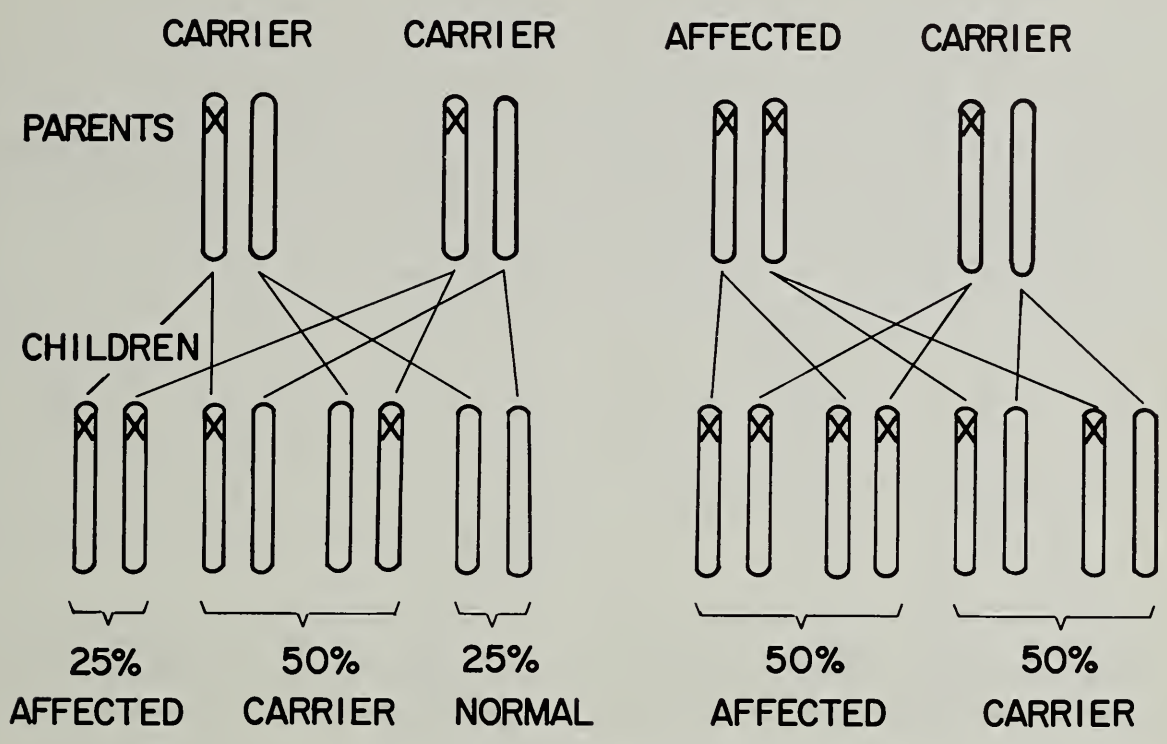


Figure 3. Autosomal Recessive Inheritance.

thought to be xanthomatoses, but now known to be due to fragmentation of abnormal collagen bundles. There are angioid streaks in the retina resembling veins, except that they are wider and actually result from an associated choroido-retinitis.[8] Gastrointestinal hemorrhage is a frequent complication in these patients because the collagen disorder involves the smaller arteries and frequently causes bleeding, sometimes from a peptic ulcer but often from an undiscovered source. Wilson's disease, or hepatolenticular degeneration, is a disorder of copper metabolism, leading to disease of the basal ganglia with associated ataxia and tremor.[9] It also eventuates in hepatic cirrhosis. With secondary portal hypertension from the cirrhosis, occasionally complicated by hypersplenism, gastrointestinal hemorrhage from esophageal varices becomes a common complication. Deposition of copper in the limbus of the cornea is recognizable as a greenish-brown ring known as the Kayser-Fleischer ring, and recognition of this feature can lead to the correct diagnosis. Both pseudoxanthoma elasticum and Wilson's disease are inherited as autosomal recessive diseases.

Autosomal recessive inheritance requires that the abnormal gene be present on both chromosomes of the given pair, which is termed the homozygous state. Figure 3 illustrates the transmission of an autosomal recessive gene, first with the marriage of two asymptomatic unaffected carrier individuals, in which case one-fourth of their children will have the disease, one-half will be carriers, and one-fourth will be normal. In the marriage of an affected individual with a carrier, the expected incidence is for half the children to be affected and for half to be carriers. Figure 4 illustrates that marriages between carriers and normal individuals will result in half of the children being carriers and half being perfectly normal. The normals do not have the gene, and therefore cannot transmit it to the next generation. A marriage between an affected individual and a normal individual leads to all unaffected carrier children.

It is important to note at this point, that once a genetic disease appears in a family, the risk for subsequent children follows these laws of inheritance, and not the risk for the general population. For instance, Wilson's disease is so rare that estimates for the overall incidence in the American population are approximately 1 in 4 million people.[9] However, for the individual who is affected, one can immediately realize from Figure 3 that

both of his parents must be carriers, if they are not themselves affected. Therefore, the expected risk for sibs of an affected individual in such case is 25 per cent for each child. Fibrocystic disease of the pancreas is a more common genetic disease, occurring in about 1 in 1500 of all live births.[8] It is also inherited by an autosomal recessive mechanism. Thus the risk for subsequent children in a family in which one affected child has appeared is one out of four for *each* pregnancy. It is incorrect to state to parents of such an affected child that they need not worry about a repetition of the disorder, since it only occurs in about 1 in 1500 births. It is also important to avoid here the "gambler's fallacy," in that the risk remains the same for each pregnancy, and is not lessened by the fact that one or more children are already affected.

SEX-LINKED RECESSIVE DISEASE

Hemophilia is a classic cause for hemorrhage and is at the same time a classic example of sex-linked inheritance. Normal humans have 46 chromosomes, consisting of 22 pairs of autosomes and two sex chromosomes. Females have two X chromosomes for their sex chromosomes, and males have one X and one Y chromosome. Sex-linked (or X-linked) inheritance is due to the presence of a recessive gene on that part of the X chromosome that is not paired by the smaller Y chromosome of the male (Figure 5). Thus all males carrying the gene are affected, since they have no corresponding gene on the Y chromosome, termed the hemizygous state. Marriages of affected males to normal females produce daughters who are all unaffected carriers and sons, all of whom are normal. In families where normal males are married to carrier females, half of the daughters are carriers and half are normal. Half of the sons are affected, and half are normal. This accounts for the transmission of the bleeding tendency of a hemophiliac male through his unaffected carrier daughters to half of his grandsons by these carrier daughters, his own sons and their children never being affected.

Marriage of a hemophiliac female, with both her X chromosomes bearing the hemophilia gene, to a normal male would produce all carrier daughters and all hemophiliac sons. An affected male

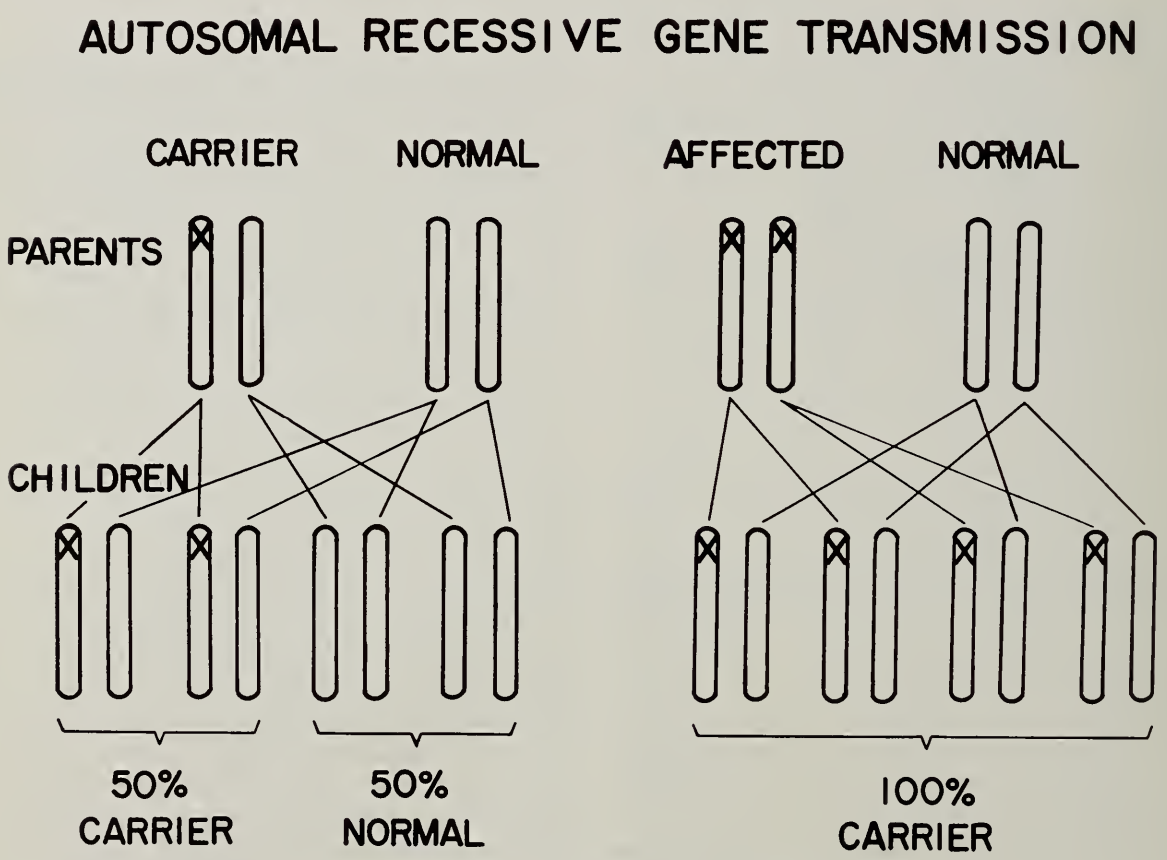


Figure 4. Autosomal Recessive Inheritance.

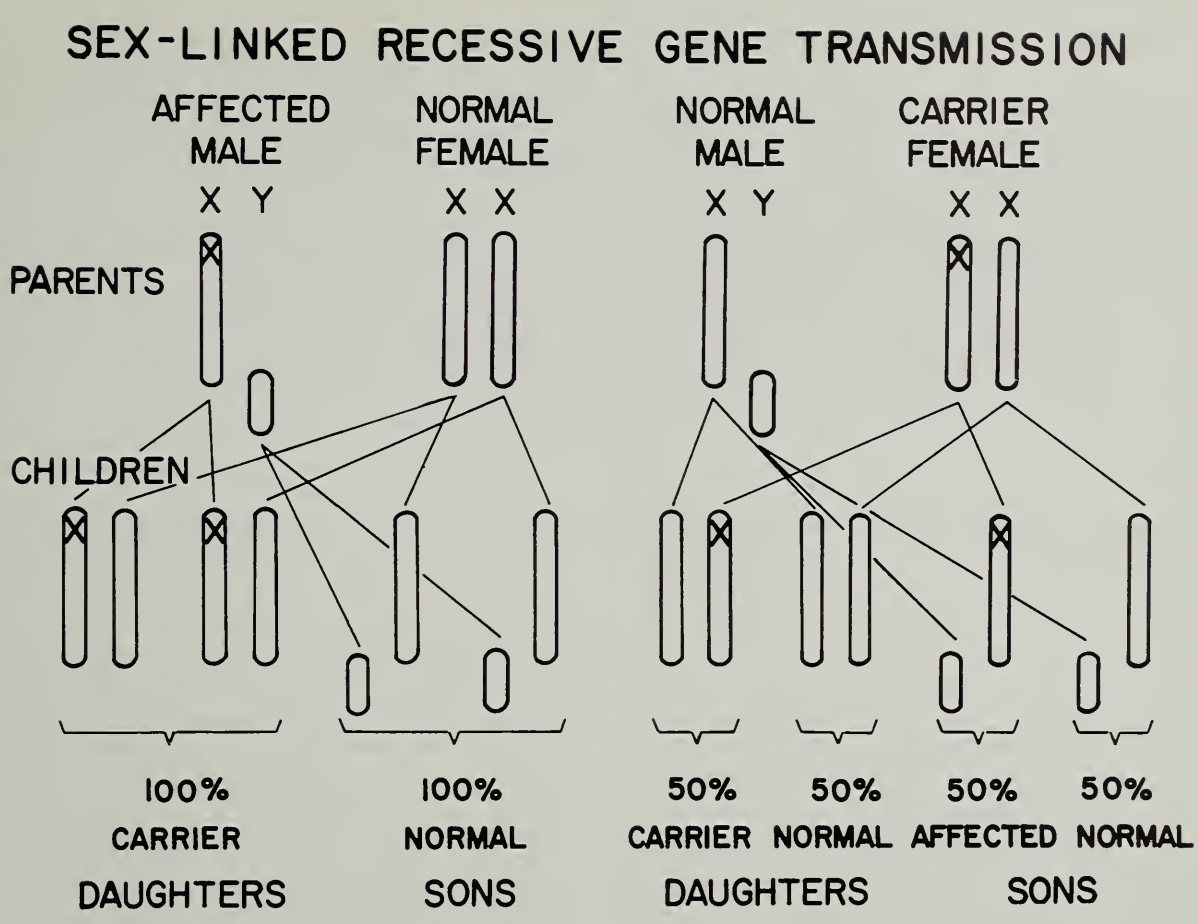


Figure 5. Sex-linked Recessive Inheritance.

married to an affected female would lead to all children being affected, both male and female. In the case of hemophilia, homozygous affected females are very, very rare, so that the latter two proposed pairings are of no practical significance. However, the same principles apply to other more common diseases which are inherited as sex-linked traits such as color blindness and glucose 6-phosphate dehydrogenase (G6PD) deficiency, a cause for drug-induced hemolytic anemia. It is interesting that an understanding of the inheritance of hemophilia far antedated the work of Mendel. The Talmud of the Jews exempted newborn males from circumcision when older brothers or maternal uncles had displayed a bleeding tendency, indicating an awareness of the inheritance of bleeding liability through unaffected females.[2]

EMPIRIC RISKS

Thus far we have talked about relatively rare or very rare causes for gastrointestinal hemorrhage. With rarer diseases, hereditary factors are much more easily delineated, so that we know in many cases the exact inheritance patterns. For common diseases, the inheritance pattern becomes more difficult to ascertain. Peptic ulcer is a common cause for gastrointestinal hemorrhage. The significantly higher incidence of ulcers in relatives of index cases leaves little doubt that genetic factors are concerned in the development of peptic ulceration. Twin studies, on the other hand, show that the manifestation of genetic factors is incomplete.[10] The inherited component in peptic ulcer is probably controlled by many genes. The ABO blood group gene and the gene that determines secretion of the ABO antigens in the saliva and other body fluids appear to be two of these genetic factors.[8] Group O individuals have about 40 per cent greater liability to duodenal ulcer than those of group A, B, or AB. People who do not secrete these antigens in their saliva and other body fluids are about 50 per cent more liable to peptic ulceration than are secretors. Taken together, group O nonsecreting individuals have about two and one-half times greater incidence

of peptic ulcer than the least susceptible group, A, B, or AB secretors.[11]

Variable environmental factors play an important part in the development of peptic ulcer. Therefore in peptic ulcer disease, we cannot predict with simple mathematical ratios the expected risk for the incidence in other family members. We can predict, though, that the other close family relatives of patients with peptic ulcer will have a higher incidence of peptic ulceration than the general population. It is estimated that about 10 per cent of the adult population has peptic ulceration at some time. Thus we can predict from compiled data that brothers of our patients with peptic ulcer will have about a 20 per cent chance of developing the disease.[10] This chance is increased even more by having the genes for blood group O and nonsecretion. Such predictions are based on empiric risks obtained from large collections of data about the disease. Thus an awareness of peptic ulcer disease in other members of the family may give a clue to the diagnosis in individual cases.

Although we cannot predict as accurately as in some other diseases, we can at least indicate to patients who desire genetic counseling the trend toward development of peptic ulcer in their future offspring. Such empiric risk figures are available for many diseases having a genetic component such as cleft palate, clubfoot, convulsive disorders, hydrocephalus, mongolism, and pyloric stenosis.[12] Even though we may not know the exact mechanism of inheritance, risk figures can provide the basis for intelligent genetic counseling for families who are concerned about the possibilities for recurrence of such diseases in other children. ★★★

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CRAZY COVERAGE

It may have been merely a coincidence, but members of the Washington press corps have one to live down. Reporters covering the President's surgery around the clock at Bethesda Naval Medical Center were housed in the main psychiatric ward.

Unclassified Mycobacterium and Home Treatment of Tuberculosis

LEE R. REID, M.D.
Jackson, Mississippi

THIS DISCUSSION of tuberculosis will concentrate on only two phases of the complicated disease, the unclassified mycobacteria and home treatment.

One of the most vexing problems today is that of the so-called unclassified mycobacterium. All health departments, deep in the home treatment program of tuberculosis, have had ample opportunities to become acquainted with these organisms. To the private practitioner, a sputum report of the finding of them may be his first contact with the problem.

The problem is particularly complicated in that for all practical purposes this group of organisms cannot be distinguished from tuberculosis bacteria by ordinary laboratory methods. These organisms can cause disease of the lungs and other organs that usually cannot be distinguished by the pathologist from the tissue changes caused by tuberculosis. Yet, they are found in perfectly normal, healthy individuals.

Historically, unclassified mycobacterium are not new. Since the discovery of *Mycobacterium tuberculosis* in 1882, these organisms have been described many times. In the last dozen years, paralleling an increase in the number of sputum cultures being planted, these so-called anonymous or atypical organisms have been appearing in ever increasing numbers.

A few years ago Runyon, in an attempt to bring some degree of order out of the existing chaos, divided the most common of these bacteria into four groups. Classification is not the job for the inexperienced hospital lab technician. Classification depends on animal toxicity, appearance of colonies as to roughness or smoothness, degree of moisture or dryness, color in presence or absence of light, rapidity of growth, as well as chemical tests not within the scope of a paper of this kind. Tests can usually distinguish these from the mycobacterium tuberculosis.

Read before the Section on Preventive Medicine, Mississippi State Medical Association, Biloxi, May 10-13, 1965.

From the historical viewpoint, unclassified mycobacterium are not new. Since the discovery of Mycobacterium tuberculosis in 1882, these organisms have been described many times. In the past 12 years, these anonymous or atypical organisms have been appearing in ever increasing numbers paralleling an increase in the number of sputum cultures being planted. In this paper, the author combines a discussion of present day knowledge of the unclassified mycobacteria with a review of home treatment of tuberculosis.

There are many overlapping organisms but the following classification is widely used at the present.

THE RUNYON CLASSIFICATION

Group I (photochromogens). These are characterized by the production of pigment by the colony of organisms only on exposure to light. These, when grown in the dark, resemble the typical tuberculosis colony. When removed from the darkness into light, the colonies, after a few hours, turn a definite color ranging from buff through yellows and orange to even brick red.

These photochromogens are found principally in the western and north central parts of this country. The disease caused by them in many respects resembles the disease caused by tuberculosis more closely than the others. It produces a serious illness in humans. Since it is seldom en-

countered in this area of the country, further comment is unnecessary.

Group II (scotochromogens). These organisms are pigmented even if grown in darkness. They have been found in increasing numbers in Mississippi in the last year or two. These organisms are not felt to cause disease except in rare instances. They are found often as contaminants in sputum from cases of bronchial and lung infection, chronic bronchitis, chronic lung abcesses, bronchiectasis, and malignancy.

Group III (nonchromogenic). The "Battey Organisms" are named for the Battey State Tuberculosis Sanatorium in Rome, Ga., because of the great amount of research performed on these organisms at this institution.

These organisms usually show no pigmentation or, if present, the pigmentation is faint. They are distinguished from *M. tuberculosis* by the physical appearance of the colony and complicated chemical tests. Colonies are usually small, round, and smooth in distinction to *M. tuberculosis* which is irregular and rough. These organisms are nonpathogenic for guinea pigs.

The preferred treatment is to get the patient in condition for surgery as soon as possible by use of I.N.H. and streptomycin. Marked or rapid improvement by x-ray under chemotherapy should not be expected.

Group IV (rapid growers). These organisms may closely resemble *M. tuberculosis* on culture but are characterized by appearance of growth on culture in from 24 to 48 hours rather than 3 to 8 weeks as is usually necessary for *M. tuberculosis*. They may, however, appear as smooth, moist colonies, as well as those resembling *M. tuberculosis*. These organisms are capable of producing disease but such disease is fortunately rare since it is difficult to treat.

In a capsule, the things to remember in regard to unclassified organisms are:

1. Groups I and III are producers of disease resembling T.B.
2. Groups II and IV seldom produce disease.
3. These organisms are almost always natively resistant to I.N.H.
4. They are not at present felt to be transmitted from one person to another.
5. All four groups are occasionally found in cases with disease caused by the regular type *(Mycobacterium tuberculosis),* acting usually as contaminants.
6. Treatment usually is not needed unless the organisms are associated with progressive x-ray changes or are repeatedly found in cases with x-ray evidence of static disease. Patients with repeat positive cultures and negative x-rays are not felt to need treatment but require careful watching.
7. In cases with progressive disease caused by the organisms, at present, the best treatment is with I.N.H. and streptomycin. These patients should be brought to surgery as soon as possible.
8. The most dangerous organism in this part of the country is Group III, since Group I is rare in the southeast.
9. Feeling at present is that these organisms are contracted through the soil.
10. These organisms will often cause a reaction to PPD. The skin reaction, however, is likely to be rather small in size.
11. Patients with active disease caused by these organisms should by all means be treated in a sanatorium.

HOME TREATMENT OF PATIENTS

There has long been a need in Mississippi for a short concise summary of chemotherapy of tuberculosis in the home. There is complete agreement in all quarters that it is best to have the chemotherapy of tuberculosis started in a sanatorium or hospital. The patient can not only get instructions in taking the drugs and supervision during the period when allergic reactions take place but also be instructed in hygienic measures to prevent spread of disease to contacts and be impressed with the need for rest and other measures. However, there are instances where for various reasons it is necessary to treat the tuberculosis patient in the home. The county health departments are supervising the treatment of hundreds of such cases and will be glad to cooperate with private physicians in any way desired.

Certain facts should be known before the home treatment is attempted. First, it should be recognized that drug resistance is the principal problem in chemotherapy. Without going into detail, it has been found that a high percentage of tuberculosis bacilli will become resistant to all known antituberculosis drugs under certain circumstances. When the resistance becomes strong, treatment reverts back to that of the prechemotherapy era. The only bright side of the resistance problem is that we are in a position to combat emergence of resistant organism in a high percentage of cases. To do this, three things are necessary: (1) multiple drug

therapy, (2) adequate dosages of the drugs, (3) adequate duration of medication. Common mistakes are giving one drug or too little medication over too short a duration of time.

THREE STANDARD DRUGS

The three standard drugs used are I.N.H., P.A.S., and streptomycin.

I.N.H. (isonicotinic acid hydrazide). This drug is almost the ideal drug for treatment because it is effective, inexpensive, available in pill form, and virtually nontoxic. In individuals of 100 pounds and over, the dosage is 300 mg. per day (three 100 mg. tablets per day). In patients weighing between 75 lbs. and 100 lbs., 200 mg. per day (two 100 mg. tablets per day) is adequate. In children the dosage is anywhere from 5 to 15 mg. per kilo, depending on the severity of infection. Ten mg. per kilo is a good average dose for treatment of disease; 5 mg. per kilo for prophylactic purposes. In prophylactic treatment, I.N.H. may be used alone.

Toxicity with I.N.H. is rare. Most often, it appears as neuritis (intercostal most common). Occasionally a rash will appear. Usually vitamin B_6 given in dosage of 50 mg. per day will prevent the neuritis.

P.A.S. (para-aminosalicylic acid). This is the least effective of the three common drugs used as far as the inhibitory action on the organisms is concerned. It is the second most commonly used drug in home treatment simply because it is given orally. It is used principally to prevent or to delay emergence of drug resistant organisms to the companion drug.

The disadvantages are many and include:

1. the large dosage necessary—12 gm. per day (24 tablets),
2. the expense because of the large dosage,
3. toxicity—principally gastrointestinal type. Nausea, vomiting, diarrhea, heartburn, indigestion, and rashes appear occasionally.

Dosage for adults is 12 gm. per day. Tablets are usually ½ gm., which means eight of these tablets T.I.D. or 6 tablets Q.I.D. Children's dosages are 200 mg. per kilo as a good average dosage to be given along with either I.N.H. or streptomycin.

Streptomycin. This was the "breakthrough" drug, the first chemotherapeutic agent found effective against tuberculosis in the human without being prohibitively toxic.

Objections to its use are:

1. the intramuscular administration,
2. toxicity,
3. the expense of having to pay not only for the drug but also for the administration of it.

Streptomycin is given in dosage of 1 gm. intramuscularly.

There is no doubt that daily dosage of 1 gm. is superior to the usual twice per week routine. However, the giving of daily intramuscular drugs poses the problem of either the patient coming to the office daily for the drug or the expense of a daily visit by the physician. The daily dosage is also much more apt to give toxic symptoms. The twice per week dosage is time honored and fairly effective.

Toxic reactions involve the 8th nerve. Deafness and loss of equilibrium occasionally occur. The appearance of difficulty in hearing should be a signal to promptly discontinue the drug. Permanent deafness is a real threat. Dizziness should also cause discontinuance of streptomycin. Occasionally severe skin rashes appear.

Most patients experience a peculiar numbness or sensation of "drawing" around the mouth and face for a few hours after the injection but this is of no clinical significance.

Children's dosage is 20 to 30 mg. per kilogram given twice per week usually. Injections may be given daily in cases with severe disease as discussed above.

Occasionally the physician is faced with treatment of a severely toxic, fulminating type of disease. Daily doses of streptomycin for two or three months may be important while a patient is awaiting admission to a sanatorium or in cases refusing to go to the sanatorium. Usually in two or three months the patient has improved enough to drop back to the twice per week dosage if the daily administration of the drug cannot for one reason or another be continued throughout the entire two or three years of chemotherapy.

MULTIPLE DRUG THERAPY

Multiple drug therapy means at least two drugs, usually I.N.H. and P.A.S. at first. If either cannot be tolerated (usually P.A.S.) then streptomycin has to be tried. Recent information suggests that all three drugs should be used in a "hit it with all you have available" attack.

The question of use of two or three drugs has been discussed pro and con for years and both schools of thought have many followers. I am of the opinion that in home treatment two drugs is

the most practical and certainly is the most widely used of the two methods.

More important than the number of drugs, so long as more than one is used, is the regularity of treatment. Resistance to drugs comes rapidly when they are taken irregularly. It is better to take the whole daily dose at one time than to take a chance of missing one or two of the doses when taken T.I.D.

DURATION OF THERAPY

As time goes on there is a tendency to keep the drugs up for a longer and longer period of time. Two years after sputum converts and after closure of cavities is the minimal length of therapy. Three years is recommended by many.

Usually the patient can return to work, if only minimal physical effort is required, after about one year of therapy, providing sputum converts promptly and cavities close.

Other drugs used such as parazinanime, ethionamide, kananycin, ethambutol, cycloserine, capreomycin, are toxic, and most of them are either expensive or experimental. They are recommended only for use in sanatoriums or in hospitals under close laboratory supervision and under direction of physicians well experienced with chemotherapy of tuberculosis.

If the home treatment patient does not make steady and rapid improvement, then it is imperative for him to be institutionalized. I believe a private practitioner should refuse to assume the responsibility of treatment of a patient of this type when they consistently refuse to accept hospital or sanatorium care.

There was widespread optimism a few years ago in regard to the imminent eradication of tuberculosis in America. The falsity of such optimism has gradually been realized by most members of the profession. It has been stated that for every case discovered and treated there is at least one case that escapes discovery. To hope for eradication of a disease under such circumstances is futile. To completely do away with a disease of this type by simply treating the discovered cases is an impossible task. Perhaps the use of the word "eradicate" was unfortunate. It has been estimated that there are probably fifty million people in the United States that harbor or have harbored the tuberculosis bacilli. If this is true the task of "eradication" begins to assume enormous proportions. Even if a completely satisfactory preventative were discovered to protect the generations yet unborn, the great "back log" of the infected individuals will be with us for many decades.

I can find no fault, however, in driving toward the goal of eradication with all available tools and energy. While it may not be accomplished soon, there is no reason why we should not make a determined beginning. It has been said that a journey of a thousand miles starts with a single step.

Dr. James Burns Ambuson, the dean of tuberculosis in America, recently stated that he did not think tuberculosis could be eradicated, but that 500 years may prove him wrong. ★★★

2423 North State St.

DANGEROUS GAME

The physician examined the shins of his husky male patient and found them bruised and battered.

"I suppose you play football, hockey, or soccer," the medical man said.

"Oh, no, doctor," was the reply. "All I play is bridge with my wife."

—Railway Clerk in Quote

The Treatment of Meniere's Disease

JOHN J. SHEA, JR., M.D.
Memphis, Tennessee

NOT ALL THAT TURNS is vertigo and not all vertigo is Meniere's disease. To be given the diagnosis of Meniere's disease the patient must have the following symptoms and signs:

1. Recurrent attacks of true turning vertigo, lasting from minutes to hours, or sudden falling attacks followed by true turning vertigo, or any sensation of severe disequilibrium. By vertigo is meant the hallucination of motion of self or the surrounding objects.

2. The sensation of fullness in the ear preceding or during an attack of vertigo.

3. Tinnitus of a roaring, nonpulsing type, before, during, after and/or between attacks.

4. The loss of hearing, usually in one ear only, before, during, and after the attack of vertigo beginning with the low tones and later involving the middle and high tones as well.

5. The tendency toward rapid fluctuations in the hearing in the early stages of the disease which become less frequent as the disease progresses, and the hearing loss becomes more profound.

6. Preservation of consciousness during the attack.

7. A tendency for the patient to lie rigid with the affected ear down during the vertiginous period.

8. Nausea rapidly following the onset of the attack, which is often followed by vomiting.

Anything in the history suggesting vertiginous epilepsy, vertiginous migraine, demyelinating disease of the central nervous system, episodes of cerebrovascular insufficiency, paroxysmal hypertension, a cerebropontile angle or other expanding intracranial tumor must be eliminated before the diagnosis of Meniere's disease can be made.

Signs and symptoms of Meniere's disease include:

From the Department of Otolaryngology, University of Tennessee, and Memphis Otologic Clinic.
Read before the North Central District Medical Society, Grenada, March 17, 1965.

1. Predominantly low tone sensori-neural hearing loss with poorer discrimination than one would expect with better hearing for the higher tones.

Meniere's disease is a distortion of the microcirculation of the labyrinth, caused by the excess production of locally induced histadine decarboxylase and by this of the excess production of locally induced histamine which brings about the slow phase of inflammation within the confined space of the membranous labyrinth.

The methods of treatment commonly in use today are analyzed in the light of this theory of the pathologic physiology of this disorder.

2. Complete recruitment, to hyper-recruitment for loudness balance.

3 Diplacusis binauralis dysharmonica (a tuning fork sounds as if it is of a higher pitch in the involved ear).

4. Absence of temporary threshold shift (adoptive fatigue).

5. Hypoactivity of the affected labyrinth to the cold caloric test.

To make a definite diagnosis of Meniere's disease, a history of recurring episodes of hallucination of motion, with relatively short period of recovery from these attacks must be present.

ANATOMY

The ear consists of two parts: the auditory portion, whose sense organ of Corti is housed in the cochlea, and the equilibrium portion, whose sense organs are housed in the semicircular canals and vestibule. While these two portions of the ear are quite distinct, their sense organs are enclosed

in the same enveloping sac, the membranous labyrinth, and the spaces that house them are continuous to form the bony labyrinth of the temporal bone. The auditory portion of the ear is supplied by the cochlear branch of the VIII cranial nerve, and the equilibrium portion by the vestibular branch of the VIII cranial nerve. The blood supply of the inner ear, the internal auditory artery, is a long and tortuous end artery that arises from the anterior inferior cerebellar artery in about 80 per cent of ears, and directly from the basilar artery in the other 20 per cent, and ascends from beneath and beside the pons, together with the VII and VIII cranial nerves to enter the internal auditory meatus, from whence it passes, through the lamina cribrosa interna, to the structures of the inner ear.

THE LABYRINTH

The membranous labyrinth is a long, sausage-shaped sac that contains about 5 ml. of endolymph. It consists of two main portions, the cochlear duct which houses the organ of Corti, and the semicircular canals which house the cristae, the organs of kinetic equilibrium. These two portions empty into the saccule and utricle respectively, which are connected by the narrow endolymphatic duct, which has a further extension away from both that leads to the posterior surface of the temporal bone, where it expands between the layers of the dura as the endolymphatic sac. This endolymph-filled membranous labyrinth is suspended within the bony labyrinth and is filled with perilymph. Perilymph is protein-rich cerebrospinal fluid which passes to the vestibule through the perilymphatic duct, which opens to the subarachnoid space in the jugular bulb. This endolymph is probably secreted by the striae vascularis within the cochlear duct, and is absorbed in the endolymphatic sac, and/or the stria vascularis and planum semilunaris surrounding the cristae and macula of the saccule and utricle.

This endolymphatic sac on the posterior surface of the temporal bone, within the layers of the dura, provides a convenient device to regulate the pressure of endolymph with perilymph, which pressure is the same as the cerebrospinal fluid pressure because of the direct connection of the perilymphatic space to the subarachnoid space through the perilymphatic duct. The perilymphatic duct delivers perilymph to the vestibule at the base of the scala tympani, just near the round window membrane. Perilymph must flow up the scala tympani, through the helicotrema and down the scala vestibuli to the main chamber of the vestibule. It is this site of origin and direction of flow of the perilymph that may account for some of the pathologic physiology of Meniere's disease.

PATHOLOGIC PHYSIOLOGY

This review of the anatomy and normal physiology of the ear are important for an understanding of the pathologic physiology of Meniere's disease. What we understand as Meniere's disease seems to be the result of the occurrence, within the endolymph-filled membranous labyrinth sac, of the microvascular changes of the slow phase of inflammation, brought about by the abnormal production of induced histamine at the precapillary sphincter by an abnormal amount of induced histadine decarboxylase which, for some reason, is produced in excess here.

The induced histamine, from the induced histadine decarboxylase system of microvascular circulatory control, is responsible for the ultimate control of the microcirculation, and derangements of this system are ultimately responsible for many abnormal conditions in the body, including the slow phase of inflammation which we assume to be the basis of the chain of events in the membranous labyrinth we call Meniere's disease. It is interesting that the ultimate action of the glucocorticoids are directly antagonistic to the action of induced histamine on the microcirculation. The exact method by which the body produces this induced histamine in response to stress (general or local stimulation) is not known, but it is entirely autonomous, not dependent on an intact nervous, adrenal, pituitary or other systems.

DISEASE PROCESS

There is an exudate formation within the striae vascularis which causes an increase in the amount and perhaps an alteration in the content of endolymph, which may be aggravated by a decrease in the amount of resorption of endolymph as a result of this inflammation. In this way Meniere's disease resembles wide-angle or nonobstructive glaucoma. Because the exact site or sites of endolymph secretion and absorption are not known, the exact sequence of events at this point is not clear. It must be that the increased amount, and perhaps abnormal content of endolymph, brings about the symptoms of this disease, but if this is so, the subsequent downhill progress of the disease in some patients is difficult to explain.

The most striking fact about the organ of Corti is the dissimilarity in chemical content between endolymph and perilymph. This difference is brought about and maintained by the secretory

action of the striae vascularis, an organ with a volume of about 1.5 ml., with the highest metabolic activity of any tissue yet measured in the body. The striae vascularis concentrates potassium in the endolymph and removes sodium, and in this way causes endolymph to resemble intracellular fluid and saliva, both of which are similarly rich in potassium and poor in sodium. This chemical difference between endolymph and perilymph *must* be important for the proper function of the organ of Corti and vestibular sense organs, although about this there is no proof.

ENDOLYMPH FACTORS

In one study of endolymph in patients with Meniere's disease, it was found to be normal in content. But, assuming as we must, that the increased production of endolymph in this condition must also be associated with some alteration in the content of the endolymph, we can postulate that the sudden onset of the attack is due to an increase in the amount and alteration in the content of endolymph. This causes the greatest distortion of the basilar membrane in the apical turn of the cochlea, where it is longest and most easily displaced, which produces the characteristic low-tone hearing loss. The true turning vertigo that is characteristic of this disease must be produced by stimulation of the cristae in the semicircular canals, the kinetic portion of the vestibular apparatus, probably from the increased pressure, because when this pressure is suddenly released, the improvement is immediate, far too rapid for any alteration in the chemical content of the endolymph. At this point the patient with Meniere's disease can go one of several ways:

1. The attack can subside, for some reason, and never recur, which is not uncommon.

2. The attack can subside and occur again one or more times. Gradually the hearing does not return to normal after an attack and the loss extends to involve the middle and higher tones. The failure to recover usually occurs when the loss reaches about 50 dB, from which it may decline to a profound and irreversible loss.

3. During an attack the patient may experience a sudden rupture of some portion of the membranous labyrinth, usually the saccule, manifest as a sudden "pop" in the ear nearly deafening to the patient, with a sudden relief from the feeling of fullness and improvement in hearing. If vertigo and the characteristic roaring, nonpulsating type of tinnitus are present, they are relieved. To be of benefit, this rupture and fistulization of the membranous labyrinth must occur before some unknown point, when irreversible damage has been done to the ear. Temporal bones have been examined in which rupture of the membranous labyrinth had taken place without improvement to the patient, due presumably to the far-advanced, irreparable condition of the organ of Corti when the rupture occurred. While histological appearance to light microscopy of the organ of Corti is normal in these ears with far-advanced irreparable Meniere's disease, not enough is known of the ultra-structure of this organ to electronmicroscopy, and it is not unreasonable to assume that such a delicate sense organ, with such an active and specialized metabolism, bathed by a fluid of such unusual content, would not be adversely affected by the long-continued alteration in the pressure and content of this fluid.

TREATMENT

With some understanding of the anatomy and pathologic physiology of Meniere's disease, it is possible to plan therapy.

As the feeling of fullness develops, and the other aura of this disease appear, the effect of locally-induced histamine on the microcirculation of the striae vascularis and the production of endolymph is subject to autonomic control, because if the patient is given a strong adrenergic drug, such as a 15 mg. Dexadrine spansule, or a potent anticholinergic drug such as .8 mg. or 1.2 mg. of atropine sulphate subcutaneously, the attack can usually be prevented.

Now, since the organ of Corti has no blood supply and depends upon being bathed by perilymph for the transport of its metabolates, it is safe to assume that alterations in the amount and content of the perilymph and endolymph are all important in the metabolism of this organ and there must be some special metabolates important in the metabolism of the organ of Corti that participate in Meniere's, and other diseases of the ear, but unfortunately little is known about them. An analogous chemical for the eye is rhodropsin, or visual purple, and the disease caused by its lack is night blindness or Vitamin A deficiency.

Lipoflavinoid complex, a mixture of B vitamins, amino acids, cobalamine, ascorbic acid, and lemon bioflavinoid complex, or eriodictyol glycoside, has proven to be of value in reducing the frequency of attacks of vertigo in 80 per cent of cases of Meniere's disease according to Williams, who has demonstrated that it is the eriodictyol glycoside in the form of lemon bioflavinoid complex that is the factor in Lipoflavinoid that gives relief in Meniere's disease.[1] The eriodictyol glycoside is known to antagonize the action of locally induced

histadine decarboxylase and probably has its action on Meniere's disease in this way.

We give the patient two Lipoflavinoid capsules three times a day and advise the patient that to be of benefit this treatment must be continued from two to six months.

As for the vasodilators, their action on this condition, in light of this theory of induced histamine and the slow phase of inflammation being the cause of this condition, is hard to explain. However, when there is too much edema and perivascular diapedesis of erythrocytes, there is sludging of blood in the capillaries and a gradual slowing of circulation, and vasodilators, such as nicotinic acid, intravenous, subcutaneous, and sublingual histamines, are of value. It may be that the histamine has the further action of triggering the adrenal mechanism to produce glucocorticoids, which are known to locally antagonize the action of induced histamine on the microcirculation. Despite the apparent contradiction of giving histamine to benefit a condition caused by locally induced histamine, it is nevertheless true that histamine is of value in some patients with Meniere's disease and should be tried.

We give the patient 2.75 mg. of histamine phosphate in 250 cc. of 5 per cent dextrose and water intravenously twice daily and follow this with very small doses of sublingual, subcutaneous, or intramuscular injections twice weekly.

Nicotinic acid is given about 30 minutes before meals in doses of 50 to 400 mg. depending on how much is necessary to produce a good flush. It is not a constant thing and some patients require much more nicotinic acid than others. The steroids and ACTH are of surprisingly little value in the treatment of the fully developed attack of Meniere's disease, although they are of great value in aborting an early attack if given in large doses. This is not surprising when you consider the ultimate action of the glucocorticoids in antagonizing locally induced histamine.

The antihistamines are likewise of value only to abort an attack rather than to relieve one, since they have an action antagonistic to the effect of locally induced histamine on the smooth muscle wall of microvessels.

The drugs Dramamine, Bonamine, Merazine, and Torecan have an atropine-like action on the microcirculation of the labyrinth, in addition to a depressing effect on the vestibular nucleii, and are more effective in relieving the discomfort of vertigo and nausea from motion sickness, early pregnancy, and after otologic operations, than in the treatment of a full-blown case of Meniere's disease.

The surgical treatment of Meniere's disease is reserved for those patients not responsive to vigorous medical treatment. The endolymphatic shunt operation of Portmann, as modified by William House, attempts to create an artificial fistula between the endolymphatic sac and the subarachnoid space to allow the escape of excess perilymph into the cerebrospinal fluid, and seems to be of some value when the disease had not yet progressed to that final irreversible stage in which there is no gain even after the increased endolymphatic pressure is relieved. The ultrasonic generator reduces and eventually eliminates the sensitivity of the vestibular apparatus, and perhaps the overproduction of endolymph, without at the same time resulting in the destruction of hearing. At any rate, the ultrasonic treatment of Meniere's disease, when well carried out, is very effective in relieving the symptoms of Meniere's disease, and spares the hearing.

When the hearing is very reduced, and the patient is incapacitated by vertigo, the remaining function of the ear and disturbing irritation from this ear can be removed by labyrinthectomy, which is easily done through the ear, or by section of the VIII cranial nerve in the posterior fossa, which is more difficult to do and is rarely done. When the hearing is good and the vertigo is severe, as from Meniere's disease and/or head injury, the vestibular nerve can be selectively sectioned through the middle cranial fossa approach. ★★★

22 North Pauline St.

REFERENCES

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DRY CLIMATE

The drouth in the east has gotten pretty bad. Now, physicians in Arizona are sending their sinus patients to New York.

Clinicopathological Conference LXX

Conducted by the Department of Pathology
Mississippi Baptist Hospital
Jackson, Mississippi

Dr. William V. Hare: "The case to be considered this morning ultimately reached autopsy. His clinical course will be discussed by Dr. Gene Crick."

Dr. Gene Crick: "This is a 52-year-old, white male who apparently developed a respiratory illness three weeks prior to admission to the hospital. We are told that he had a severe hacking cough, fever, dyspnea, and edema. He had to sit up at night because of orthopnea. Past history revealed no hypertension or heart disease. On admission to the hospital, he was hypertensive (192/120), cyanotic and extremely dyspneic. His liver was down two fingerbreadths below the right costal margin.

"I do not know whether the patient's initial illness was influenza or a bacterial pneumonia. His WBC was 12,300 on admission with a shift to the left. Certainly with a bacterial respiratory infection his WBC should have been much higher. He had received some antibiotics about two weeks prior to admission, so I believe the initial illness was of viral etiology.

"We were told that he developed orthopnea, edema, and shortness of breath about one week before admission. He was cyanotic and his liver was down. We have reason to believe that the patient was in congestive heart failure. He was given Digoxin and Mercuhydrin, so I assume the patient's doctors thought he was in congestive heart failure, too. On admission to the hospital his blood pressure was 192/120, but after receiving Digoxin and Mercuhydrin his blood pressure dropped down to 155/90. We are told that he had rales in his chest posteriorly and that his face and arms were cyanotic. He was started on drugs and deteriorated quite rapidly, and in less than a 24 hour period he expired. Just before the patient expired, he became extremely cyanotic and disoriented, and got out from under the oxygen tent, and according to the nursing personnel he developed wheezing. It would have been helpful if the nursing staff had recorded his blood pressure. I believe he developed acute pulmonary edema shortly before he expired.

The patient in CPC LXX is a 52-year-old male who apparently developed a respiratory illness three weeks prior to admission to the hospital. He had a severe hacking cough, fever, dyspnea, and edema. Past history revealed no hypertension or heart disease. On admission, he was hypertensive, cyanotic and extremely dyspneic. His liver was down two fingerbreadths below the right costal margin. He expired in less than 24 hours.

Dr. Gene E. Crick presents the medical discussion and Dr. William V. Hare the pathologist's report. Other discussers are Drs. Elmer J. Harris, Albert Meena, William Wilson, J. Manning Hudson, and H. K. Stauss.

"The lab values did not help us very much. The CBC was 12,300, with a shift to left; urinalysis revealed 1+ albumin. BUN was 33 per cent. Sed rate was 6 mm/hr. An EKG was interpreted as within normal limits. The chest x-rays revealed prominent bronchovascular marking in the right chest with moderate grade emphysema, and the heart was within normal limits. The BUN was elevated, and I think this could be explained on the basis of benign prostatic hypertrophy with recurring urinary tract infections and kidney damage.

"I would like to think that this patient had been in the bed for a couple of weeks and probably became ambulatory a day or so before admission. He could have been throwing small emboli originating in the leg veins or prostatic veins. We are told that he was cyanotic and extremely dyspneic

on admission. He deteriorated rapidly and without pain. I guess we can entertain the idea that the final blow was a large embolus to the lungs.

"I think we can exclude an aneurysm because the patient did not experience any pain. He was not in shock at any time as far as we know. A coronary thrombosis certainly should be mentioned in passing.

"This patient had been smoking practically all his life and we know from x-ray that he had moderate grade emphysema and probably had chronic lung disease. One would certainly want to rule out bronchogenic carcinoma of the lungs; however this disease would not have caused his demise this quickly.

"In summary, I think this patient initially developed the influenza, maybe primary atypical pneumonia, or some other strain of virus. He subsequently developed congestive heart failure, and apparently was admitted to the hospital in congestive heart failure or maybe from pulmonary emboli originating in leg veins. He expired from a massive pulmonary embolus, acute pulmonary edema, or coronary thrombosis."

RADIOGRAPHS

Dr. Hare: "Would you like to see the x-rays?"

Dr. Crick: "Yes, I would."

Dr. Hare: "Dr. Harris, could you tell us how this x-ray was originally interpreted and whether you have any additional comments in retrospect?

Dr. Elmer J. Harris: "That film was dated April 8. Dr. James Packer read it and felt that the heart was not enlarged. There is mild to moderate emphysema there. We would not think that it shows pulmonary congestion. The trunks are not particularly engorged, and there is a little blunting at the left costophrenic sinus, probably from some old pleural thickening. All in all, I think you could say that the findings are not particularly significant except for emphysema."

Dr. Hare: "Mild to moderate emphysema, and otherwise essentially negative?"

Dr. Harris: "Otherwise, it looks all right."

Dr. Hare: "Dr. Harris, in a practical sense, do you have any way of radiologically separating relatively acute emphysema from chronic emphysema? Or do they all look the same?"

Dr. Harris: "They all look the same except for some acute obstructive process such as from a foreign body with localized emphysema. Otherwise I think they look essentially the same. There might more likely be a fibrotic change associated with it if it's chronic."

Audience: "Is there any difference in the radiolucency of the two sides?"

Dr. Harris: "This film is taken with a grid and the left looks a little more radiolucent, likely from the tube being a little off center in relation to the film. The reason I say that is because if there actually was emphysema in the left and not in the right, I think we might have our diaphragm depressed and some other things that would give us a clue."

Dr. Albert L. Meena: "Was this a portable film?"

Dr. Harris: "No, it's not."

Dr. William Wilson: "I'm interested in the fact that there was evidence of right heart failure without demonstrable cardiac enlargement, which suggests constrictive pericarditis. Of course, constrictive pericarditis wouldn't account for his acute symptoms or his fever unless you hypothesized superimposed febrile illness. Another possibility would be obstruction in the right atrium, which I don't imagine we could tell much about on x-rays, but what does heart failure without heart enlargement suggest to you, Dr. Hudson? Do you think a patient could die from multiple recurrent pulmonary emboli without showing cardiac enlargement?"

Dr. J. Manning Hudson: "There are a number of heart diseases that have failure without enlargement. Hypertensives have failure without x-ray evidence of enlargement, either right or left. Certainly, we all know that arteriosclerotic diseases with old infarction could certainly have congestive failure without enlargement. Pericarditis is the classical one, I guess, but really the heart is often enlarged in this condition. Pulmonary emboli can certainly cause evidence of right heart failure without producing x-ray evidence of enlargement. Often there is hypertrophy of either left or right ventricle without any x-ray evidence at all. That right ventricle could be either 0.5 cm. or 1 cm. thick and Dr. Harris couldn't tell it. Could I see the electrocardiograms?"

Dr. Hare: "Here they are."

CHANGE IN ECG

Dr. Hudson: "The point I got out of the history is that this man's ECG changed, and, indeed, it did, a little. I'm not so sure that I would call it perfectly normal. It shows a little evidence of right ventricular prominence."

Dr. Hare: "Any other comments, questions? Dr. Stauss."

Dr. H. K. Stauss: "The apex to the heart looks turned up a little bit. That could go along with right ventricular enlargement. The other thing is I'm not so sure that that difference in radiolucency is explainable on a technical pattern. I think there is some peribronchial or perivascular marking on the right. The right hilus is not unduly enlarged, but I believe that pulmonary artery would be considered as suspicious for enlargement, particularly when you see it there at the fourth interspace. I would have to give some consideration to the problem there together with the known history of cyanosis, I think I would think of not only multiple but probably a more recent major pulmonary infarct."

Audience: "We don't know the venous pressure readings, do we?"

Dr. Hare: "No venous pressure is recorded."

Dr. Stauss: "Was there any difference in the wheezing on the two sides?"

Dr. Hare: "Not so described, no."

Dr. Hudson: "They describe rales in the left base and not in the right. May I ask Dr. Harris some questions? In a major left pulmonary artery obstruction where the left lung is ischemic, would you get increased pulmonary flow in the right enough to account for this much difference? To produce a difference in radiolucency?"

Dr. Harris: "Yes, I believe so."

AUTOPSY FINDINGS

Dr. Hare: "Other comments? If not, then we will go on to the autopsy findings. First, there was this peculiar cyanosis noted clinically, so we were asked to watch for superior vena cava syndrome. We went first to the superior vena cava and could find no significant dilatation or obstruction of it. In retrospect, the cyanosis was said to have changed and became more equalized later on anyhow, but this was an early impression and we put it in as recorded in the chart. Why there should have been a difference I don't know. As noted, it did get milder later on.

"Second, with the clinical evidence and the morphologic evidence of the autopsy, I think we have to admit that this patient did go into terminal cardiac failure and that this was the immediate cause of death. His heart was large; it weighed 590 gm. There was hypertrophy of both sides. We felt it a little bit more marked on the left than on the right. In view of the hypertension when he came in and the cardiac hypertrophy, I think we have to assume that the man did have chronic hypertension. Although the history says there is no history of past hypertension, when we checked back later there was really no history of blood pressure being taken as far as I can find out. That is, while it is true that there is no past history of hypertension, there is also no real history of a lack of it. So I think we must assume he has had hypertension actually for a long time with that big a heart. Second, this was 'essential' hypertension since the kidneys grossly appeared normal, and histologically although we strained our eyes looking at the arterioles, there simply were no striking changes in them. Morphologically, then, this was not renal hypertension but essential hypertension.

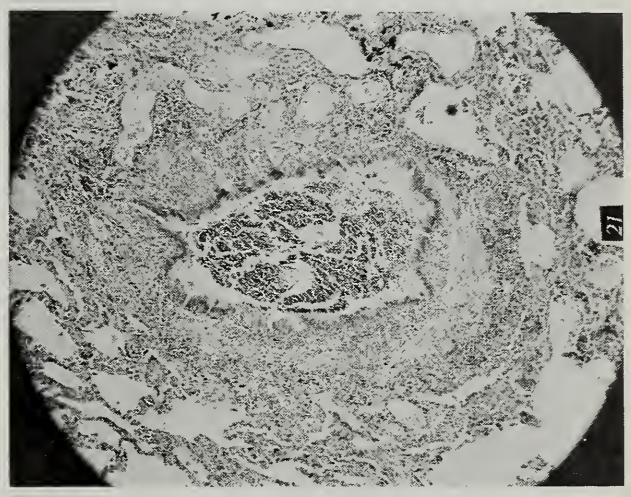


Figure 1. Purulent bronchiolitis with surrounding area of peribronchial interstitial pneumonia. (× 60)

"Now, other than these incidentals the main and really the solitary major findings were in the lungs. Grossly, the right lung weighed 1050 gm. and the left weighed 660, so there was a little more disease in the right side than in the left. There was some little speckling grossly and some slight consolidation and some pulmonary wetness. There was no frank gross pneumonia. We couldn't decide whether minimal pneumonia was present or not, but at least it was not obvious.

"For microscopic study we took seven sections of the lung, one from each of the major lobes and then three extras, and they all have essentially the same appearance. They all showed obstruction of the bronchioles. Some bronchioles had pus plugs in them (Figure 1). Note also the peribronchial pneumonic consolidation. In the second area (Figure 2) note the ulceration of the bronchiole and early replacement of exudate by granulation and fibrous tissue. In some of the bronchioles the exudate had been largely replaced by young fibroblastic tissue (Figures 3 and 4). These lesions were widespread. In the peripheral portions of the lung there was marked emphysema, and it appears to be acute. Now, in a 52-year-old

man, emphysema could well have been present before, but this looked like an acute emphysema in that we don't have the diffuse pulmonary fibrosis that usually accompanies chronic emphysema.

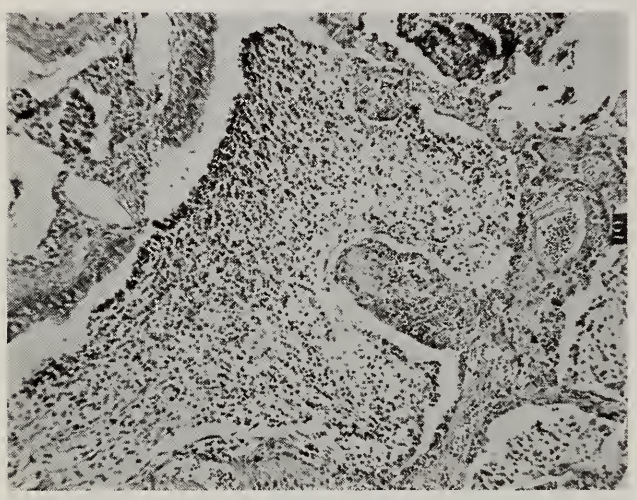


Figure 2. Chronic purulent bronchiolitis with ulceration (bottom portion of bronchiole) and early fibroblastic replacement of exudate. (× 100)

"This combination of lesions has been described under various names including particularly the terms 'bronchiolitis fibrosa obliterans' and simply 'bronchiolitis obliterans.' The terminology implies first that the main lesions are in the bronchioles rather than the larger bronchi. Second, there is pus followed by fibrosis of the lumens of the bronchioles which obstructs them. It produces a

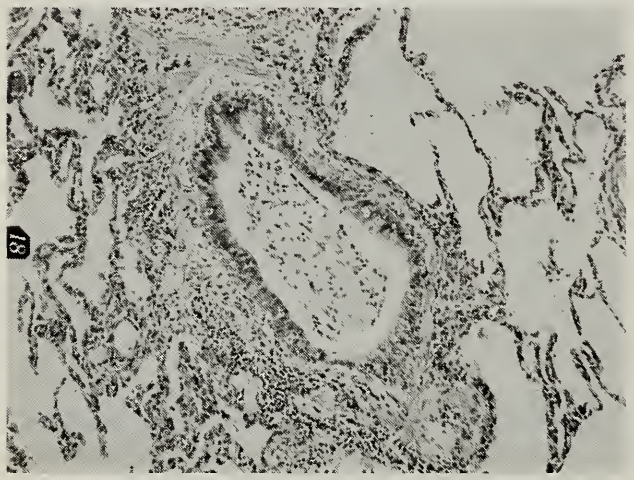


Figure 3. Young granulation tissue plugging bronchioles; note bipolar fibroblasts. (× 60)

peculiar clinical picture in that in contrast to the usual complication of bronchitis, namely pneumonia, instead of consolidation with dullness you get an increased resonance on percussion of the chest. This is a little disappointing in that that point was not brought out in the physical, but at least the radiologists noted the emphysema which was diffuse in this case, and I suspect acute secondary to the bronchiolitis.

"The etiology of this condition varies. For that reason, most pathologists today simply call it subacute, ulcerative, or organizing bronchiolitis. It is a severe form of bronchitis, if you will. In the bronchioles which are involved there is acute inflammation and then around them there is an inflammatory response, not out in the alveoli as in ordinary pneumonia, but in the peribronchial tissues. It tends to be mononuclear, and the pathologists have called this peribronchial interstitial mononuclear pneumonia. Well that's too big a mouthful so obviously it is not popular. This is the descriptive term and is characteristic of virus pneumonias.

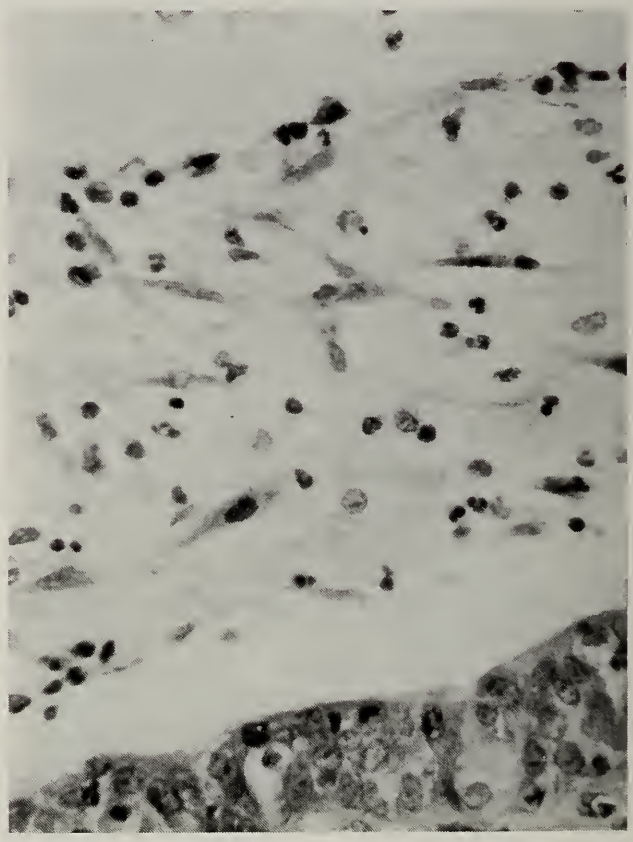


Figure 4. Higher magnification of Figure 3. Note young fibroblasts replacing exudate in bronchiole. (× 475)

"In the virus pneumonias we usually don't see inclusion bodies and I stress that because everybody says, 'Did you find inclusion bodies and if you didn't what makes you think it is a virus?' Any self-respecting pathologist on finding an inclusion body shows it to at least 10 other clinicians or pathologists before he takes the slide off his microscope. This is a standard procedure. They are

so rare and pretty that we all stress them, but statistically they aren't seen very often. We could not find them in this case. Probably the best evidence in this case is the apparent infectious nature of the disease since another member of the family had a respiratory disease at the same time. The cultures of bronchial pus in this case at autopsy were negative for bacteria. The disease is commonly caused by viruses including the influenza virus. It has been reported in the smog bronchitis and following exposure to nitrogen dioxide and various noxious gases. Although the term is not widely used today, bronchiolitis fibrosa obliterans is not a bad term since it is quite descriptive. Our case today shows the classical histology of those cases that go ahead to a fatal conclusion.

"Now, with regard to the cause, in the present case a virus is probably the etiologic agent although we cannot prove it. Most laboratories are not equipped to demonstrate viruses, and we cannot do it here. We have the history of multiple members of the family having a respiratory disease and no history of exposure to noxious gases. One reason we are presenting this case is that we have had two cases of it within a month at autopsy."

Dr. Harris: "Was that an adult, too?"

Dr. Hare: "The other one was in a 17-year-old girl. That was one where the radiologist noted some peribronchial changes. In that case there was a terminal infection with pseudomonas which didn't happen to be sensitive to the antibiotics used.

"Now, the statement about the son's hand being amputated in the family history. I thought was a strange note and at first didn't record it and then found out it was a pertinent point in this case. This man got sick about the time his son lost his hand, so he set up at night in the hospital with the son. He had a job, so he continued to go to work in the daytime. As he got worse, he went to his local physician and got loaded up with antibiotics but still did not go to bed. In your discussion, you mentioned his being in bed, but actually he didn't go to bed. He obviously should have. So this is a classical case of abuse of bronchitis or bronchiolitis by staying up at night, smoking, and continuing to work while taking antibiotics. Actually, when he came in to the hospital he was moribund, and his physician so recognized the case. He went on out acutely, really as a terminal myocardial failure.

"So, in summary, we present this as a case of a condition that is not as rare as its name sounds. Also, we think of bronchitis as a benign condition, but it can be fatal, particularly if abused. Technically, this case terminated as bronchiolitis fibrosa obliterans, but he may have had ordinary bronchitis or bronchiolitis earlier."

Audience: "Is this much more common in children than in adults? The pediatricians make a big point of bronchiolitis. Is this the same sort of thing that we see in children?"

Dr. Hare: "The children certainly have the bronchitis and bronchiolitis and occasionally they are fatal. In the cases that come to autopsy we don't ordinarily see the fibrosis of the exudate, however, and some degree of pneumonia is usually present."

Audience: "Why can't you just go ahead and call this straight bronchopneumonia?"

Dr. Hare: "First, the signs and symptoms are enough different clinically that it seems worthwhile to separate the two. Secondly, although the etiology may be the same, the morphologic manifestations are entirely different. This man choked to death from plugging of his bronchioles (with resultant emphysema) rather than exudate filling his alveoli as in ordinary bronchopneumonia."

★★★

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PUBLIC DEFICIT

Commenting on Medicare, comedian Vaughn Meader observes that ever since George Washington threw a silver dollar across the Rappahannock River, politicians have been wasting money.

Radiologic Seminar XLIII: Ureteral Reflux in Children

C. D. BOUCHILLON, M.D.
Laurel, Mississippi

ANY CHILD WITH UNEXPLAINED urinary symptoms or recurrent urinary infections deserves a complete urologic investigation. An essential part of this workup is the voiding cysto-urethrogram. This procedure portrays radiographically the bladder and urethra, and most importantly, determines if ureteral reflux is present. Briefly, the examination consists of filling the bladder with contrast solution and then obtaining radiographs during voiding. With practice and patience, satisfactory visualization can be accomplished in almost every patient. Obvious lesions such as dilatation, trabeculation, diverticula, and stenosis may be seen as well as the rare posterior urethral valves and verumontanum hypertrophy. Bladder neck obstruction, demonstrated by some investigators, is the subject of much controversy as to its appearance and etiology.

REFLUX ABNORMAL

Ureteral reflux when shown is almost always abnormal (Figures 2 and 3). It is most likely to occur during voiding and may be seen on one or both sides. It may vary in degree from mild, transient, and curable, to severe with irreversible damage to the upper urinary tract. The reason for the incompetency of the vesicoureteral valve is the subject of controversy. Infection, causing induration of the intramural portion of the ureter, with or without obstruction at or below the bladder neck is certainly the major cause. Damage to the upper outflow tract and kidneys is believed to result from increased pressure in the ureter and pelvis plus the chronic bathing with infected urine.

It is the primary purpose of this article to emphasize that reflux is an alarming finding. It is present in 12 to 34 per cent of children with urinary symptoms. About one-half of the patients with reflux will have upper tract dilatation. Seventy-five per cent of these children will have a normal intravenous pyelogram and frequently the cystoscopic examination is negative. With thorough workup, however, the underlying cause of the reflux can usually be determined.

TREATMENT

Treatment is aimed at correction of the underlying cause of the reflux. A prerequisite for good results is the early institution of therapy since reflux apparently becomes rapidly irreversible once it has been firmly established. For uncomplicated cases, conservative measures with extensive antibiotics and frequent voidings will result in cure and disappearance of the reflux. Dilations, surgical plastic procedures on the bladder neck and urethra, and ureteral transplantation will be required for others.

In conclusion, it must be emphasized that the early use of the voiding cystogram will allow effective treatment of many children with reflux before they have permanent renal damage, and that in the presence of persistent urinary tract infections in children, this technique is an essential part of the workup. ★★★

Sponsored by the Mississippi Radiological Society.
From the Community Hospital, Department of Radiology.

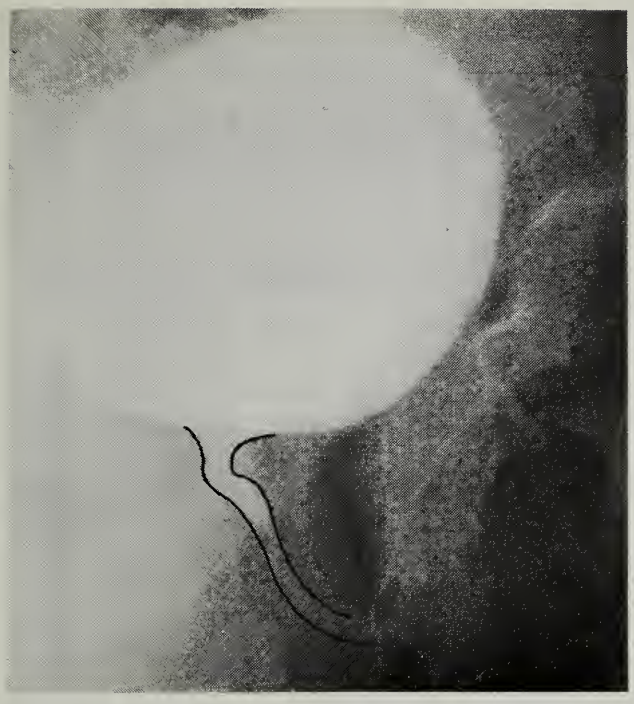


Figure 1. A normal voiding cystourethrogram, showing well the area of the bladder neck and urethra. (Retouched for purposes of illustration.)

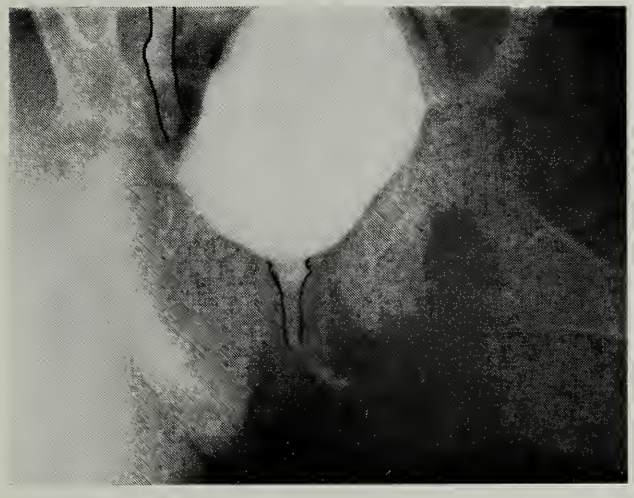


Figure 2. A voiding cystourethrogram in an 8-year-old female with a history of recurrent urinary infections, demonstrating reflux from the bladder up into the right ureter. The bladder and urethra appear essentially normal. (Retouched for purposes of illustration.)



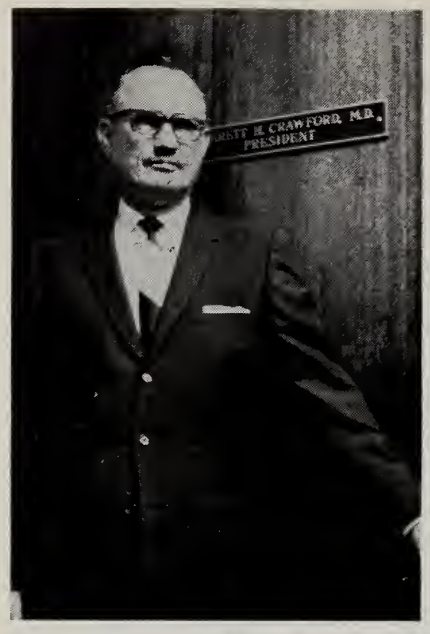
Figure 3. An abdominal film on the same patient, demonstrating moderate hydroureter following reflux. On intravenous pyelography, the right drainage tract appeared normal, emphasizing the point that a voiding cystourethrogram is an essential part of the urinary tract workup in children.

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DISQUIETING DESCRIPTION

Psychiatrist to office nurse: "Please, Miss Jones, just say 'We're very busy,' not 'it's a madhouse.' "



The President Speaking

'Their Cause Is Right'

EVERETT CRAWFORD, M.D.
Tylertown, Mississippi

THE NATION'S RADIOLOGISTS are taking a decisive step toward attaining what their American college calls "parity with other physicians." With courage and resolution, they are separating themselves from the sometime murky pool of hospital services, claiming their rightful and ethical professional status, and establishing a proper and direct physician-patient relationship. They merit the support of their colleagues in other disciplines for the best of all possible reasons: Their cause is right.

The American College of Radiology concedes that "the nation's radiologists have allowed themselves to be part of a relationship in which hospitals billed for their services as part of a combined charge to patients served in hospital radiology departments. The convenience of this masked the subtle change by which the specialty came to be identified as a hospital, rather than medical, service. . . ." The advent of Medicare may have accelerated the decision, because the last fight was over the so-called hospital-based medical specialists.

Radiologists are now under an ethical obligation to separate their professional fees from hospital charges and to present their own statements to their patients. Moreover, a hospital may not be used as a billing, accounting, or pooling agent. In all respects, these specialists are determined to be on the same footing—no more, no less—as are those in the classic concept of private practice.

At our 97th Annual Session, the House of Delegates spoke for radiologists in unmistakably clear terms when it said that the association "does reaffirm that the practice of radiology is the practice of medicine in all relevant senses and does reject any definition that would seek to portray the practice of any medical discipline as a hospital service." In supporting our colleagues in radiology, we now have an opportunity to make deeds from our words.

★★★

JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION

Volume VI, Number 11
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EDITORIALS

The Medical School Dropout: Phenomenon of Inferiority?

I

DROPOUT HAS BECOME, in modern usage, an ugly word. It identifies a student who, although presented with an education opportunity, cannot or will not stay in school. The dropout is decried by educators, lamented by society, despaired of by parents, and subsidized by Congress. He is and should be the subject of deep concern, because the individual without an education is an individual without the basic tools with which to build a productive life in a complex, competitive era.

There is no stereotype or standard caricature of the dropout. He may be a first grader whose parents attach little importance to school or a postgraduate student who can't cut the mustard. Emotional problems, familial responsibility, and a whole range of nonacademic reasons may influence the individual's becoming a dropout, and it is not without significance that these reasons are almost as numerous as academic failures.

A medical school dropout is neither novel nor new on the education scene. Nearly everybody knows that medical school is difficult, requiring not only baccalaureate preparation of a specialized nature, but also the temperament, ability, and determination found only in those whose goals and purposes in life are well defined and who have the grit and spunk to stay with them in dogged pursuit. Yet, despite better elementary, secondary, and higher education than ever before, medical school dropouts are growing both by numbers and percentages. It is not a pleasant trend to contemplate.

II

An authoritative study of medical student attrition was conducted by the Association of American Medical Colleges, and the findings were released only recently. AAMC followed each student entering medical school from 1949 through 1958, observing each entrant over the course of a four year medical education. Previous studies of this nature may have been fallacious, because they superficially compared the number of entrants in any given year with the sum of the graduates four years later.

It was discovered that the overall proportion of medical school entrants who failed to graduate at the conclusion of the 1962-63 academic year rose from a low of 6.65 per cent of those who matriculated in 1950 to a high of 10.43 per cent of the 1958 entrants. This shows a rise in the dropout rate of more than half, 57 per cent, as a matter of fact.

Both the number and per cent of academic dropouts from medical schools have consistently exceeded those who are lost because of nonacademic reasons. Interestingly enough, however,

AAMC's meticulous research turned up a relatively stable pattern in the per cent rate of nonacademic attrition. Academic losses, however, reflect consistent, progressive increases. Among 7,135 students entering the nation's medical schools in 1949, exactly 315 or 4.41 per cent became academic casualties. In the 7,950 matriculating in 1958, there were 520 lost to medicine, a 6.54 per cent attrition, for academic reasons.

On the other hand, the nonacademic dropout rate shifted upward less than 0.2 per cent, from 3.70 to 3.89, after ranging as low as 3.02 for 1950 freshmen and as high as 4.30 for those beginning their training in 1957. And the 10 year mean for nonacademic dropouts was only 3.58 per cent against 5.11 per cent of those who couldn't make the grade.

III

The almost 9,000 students entering the 88 operational medical schools in September came from more than 800 American colleges and universities. Over a period of more than a decade, the new entrants are scoring about the same or even a little better on their Medical College Aptitude Tests. The same pattern applies to those applicants who are rejected, too. So, it is generally clear that student quality really isn't the prime factor in growing attrition during the years of training to become a physician.

A few writers, notably the critics of the medical profession, allege that only the children of the rich can afford to study medicine. If this were ever true—and it is to be doubted that it was—it assuredly is not today. There are unusually large and varied sources of financing for medical education, ranging from the important AMA-ERF student loan program through the gamut of scholarships, nonrefundable grants, bank loans, to out-and-out education support from public tax-supported programs.

Even in 1960, before the substantial increase in the variety and number of student financing opportunities, 52 per cent of all American medical students came from families with incomes under $9,999 per year. And this level characterized the 1960 income of about half of the urban families in the country.

In 1964, married medical students—nearly six out of 10—were mostly supported by the earnings of their spouses, with only one-sixth of their money coming from their families. The single student got about half his keep from parents, but both the single and married students earned as much as a third of all the money they had. Obviously, it's time to disabuse ourselves of the false notion that only the rich can study medicine.

IV

The point is simple: If it is accepted that the better off make up a more able group in society and the impoverished are generally less able, the American medical student is somewhere in between. He is neither a man with a corner on the advantages of wealth any more than he is a product of the least educated and, hence, least able segment of the population.

He is, in fact, a little brighter than he was 10 years ago, and he is industrious, dogged, and purposeful in his career aim.

Before writing off the medical student of today as an individual caught up in an academic avalanche, take a quick look at what is happening in the undergraduate college picture and in other professional education endeavors: More than 40 per cent of all college freshmen fail to graduate and earn the baccalaureate degree. Forty-three per cent of all law school entrants drop out before their classmates receive their LL.B.'s. Degree nurse programs at university level parallel the law schools in student attrition.



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"And this is a cheaper brand. It only drains six of the eight sinus cavities."

Only one out of nine medical school entrants falls by the wayside, and that record—as much of a concern as it is in this most difficult of educational pursuits—speaks pretty well for the student, the school, and the profession.—R.B.K.

Medicine's Bicentennial

1965 marks the bicentennial of medical education in the United States and the beginning of medicine's third century of service. In 1765, a young physician named John Morgan returned to his native Philadelphia, then the mother city of the 13 colonies. With the help of Benjamin Franklin, he organized the first American medical school in the shadow of the government house where the Declaration of Independence was to be signed 11 years later.

Working with the College and Academy of Philadelphia and the Pennsylvania Hospital, an institution "piously founded for the relief of the sick and miserable," Dr. Morgan opened what is now the University of Pennsylvania School of Medicine in May 1765. In 1768, 10 students received the Bachelor of Medicine degree, and the first American medical graduate was Dr. John Archer of Maryland whose direct lineal descendant, Dr. John G. Archer of Greenville, was 1963-64 president of the association.

In two centuries, more than 20,000 physicians have been graduated from the school, and they have help found 29 other medical schools in the United States. It is fitting that both the republic and American medical education were born in the same city, and there couldn't be a better time than now in which to contemplate this unusually propitious circumstance.—R.B.K.

Single Unit Control

Control of narcotics at the dispensing source often presents a king-size headache to pharmacists, physicians, and administrative personnel, especially in the modern hospital. In addition to the ever-present danger of access to narcotic supplies by unauthorized people, some of whom are addicts, there are latent hazards of spillage, breakage, and spoilage, all of which add to records-keeping and accounting tasks.

In the Lumberton, N. C., Southeastern General Hospital, an interesting study has just been concluded. The pharmacist of the 265 bed institution has dispensed narcotics for two years in the relatively new single dose containers. Four simple forms were all that was needed for adequate records. Invitations to pilferage were substantially decreased, and happily enough, medication errors were far less, too.

Weekly distribution of the single dose units to nursing stations cut down repeated handling of the drugs. Inventories were quickly and simply made. In view of the recent drug control amendments to FDA laws, the single unit dispensing system appears to have advantages for all.—R.B.K.



NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

Savage, James Frederick, Jr., Jackson. Born Webb, Miss., Aug. 13, 1935; M.D., University of Mississippi School of Medicine, Jackson, 1959; interned Tampa General Hospital, Fla., one year; anesthesiology residency, University of Mississippi School of Medicine, Jackson, two years; member, Mississippi Society of Anesthesiologists and the American Society of Anesthesiologists; elected Aug. 3, 1965, by Central Medical Society.

Smith, Gerald Arthur, Sumner. Born Memphis, Tenn., Jan. 29, 1935; M.D., University of Mississippi School of Medicine, Jackson, 1963; interned Mississippi Baptist Hospital, Jackson, one year; elected March 17, 1965, by Clarksdale and Six Counties Medical Society.

Wilson, Thomas Epps, III, Jackson. Born Jackson, Miss., March 25, 1932; M.D., University of Virginia School of Medicine, Charlottesville, 1958; interned University of Virginia Hospital, Charlottesville, one year; residency, University of Mississippi School of Medicine, Jackson, three years; fellowship, Mayo Foundation, Rochester, Minn.; elected Sept. 7, 1965, by Central Medical Society.



DEATHS

No deaths of physicians were reported to the Journal for the period Sept. 1-30, 1965.

PERSONALS

HUGH B. BARNES of Petal represented his Kiwanis Club as delegate to the recent district convention at Lafayette, La., where clubs of the Louisiana, Mississippi, and West Tennessee district observed the Golden Anniversary of Kiwanis International.

CHARLES J. COX has announced the opening of his office for general practice at 130 Carrol Ave. in Bay St. Louis.

FRED D. HILL and JOHN A. MCLEOD, III, of Hattiesburg have moved their offices to the Medical Arts Building. Their practice is limited to anesthesiology.

CHARLES H. MARTIN has joined the staff of the Natchez Medical Clinic where he will limit his practice to internal medicine.

W. L. MCFARLAND, J. B. LEVENS, JR., and M. L. DODSON have announced the association of HENRY A. MAGGIO in the practice of medicine and surgery. Drs. Levens and Dodson will maintain office hours at Waveland and Drs. McFarland and Maggio, at Bay St. Louis.

JOSEPH G. MCKINNON of Hattiesburg recently addressed the Life Underwriters Association on medical information and reports from the viewpoint of the practicing physician.

JOHN H. MILLER of Grenada has been appointed director of the county health departments of Grenada, Tallahatchie, and Yalobusha counties. He attended Millsaps College and was graduated from the University of Mississippi School of Medicine, interned at Savannah, Ga., and has served as an Air Force medical officer.

ALTON F. MOSS is serving as president of the Ellisville Rotary Club. A recent service project of the organization was sponsorship of a children's carnival.

J. G. PEELER of Shaw has retired from the Bolivar County School Board after serving since 1950.

RICHARD E. SCHUSTER has returned to full time practice at Brandon, limiting his professional endeavor to anesthesiology, medicine, and obstetrics.

WALTER H. SIMMONS is the leading producer of new memberships in the Jackson Chamber of Commerce. He is a member of the chamber's Finance and Membership Committee.

State Morbidity Reported Through Sept. 10

The Mississippi State Board of Health reports the following occurrence of morbidity for 1965 through the 38th week of the year, ending Sept. 17, 1965. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul.	1,033
Tuberculosis, O.F.	28
Typhoid fever	5
Encephalitis, infectious	15
Toxoplasmosis	1
Septicemia, Staph.	10
Brucellosis	1
Dysentery	
Bacillary	44
Amoebic	1
Dysentery, NOS	9
Leptospirosis	1
Meningococcal infections	26
Diphtheria	2
Mononucleosis, infectious	41
Hepatitis, infectious	212
Hepatitis, serum	1
Tetanus	2
Helminthic infections	
Hookworm	787
Ascariasis	294
Strongyloides	47
Meningitis, O.F.	24
Histoplasmosis	10
Other Cestode Infestations	6
Salmonella Inf.	25
Gastro-enteritis	2
Streptococcus infections	
Scarlet fever	29
Strep throat	1,666
Pertussis	14
Measles	1,443
Chickenpox	257
Mumps	355
Vaccinia, smallpox	1
Influenza	5,892
Gonorrhea	3,311
Syphilis	
Early	439
Late	98

Book Reviews

Obstetrics: From the Original Text of Joseph B. DeLee, M.D. Thirteenth Edition. By J. P. Greenhill, M.D., F.A.C.S., F.I.D.S.(Hon.), F.A.C.O.G. 1246 pages with 1296 illustrations on 1193 figures, 54 in color. Philadelphia: W. B. Saunders Company, 1965. $20.00.

The newest edition of this classic obstetrics textbook appears five years after the last edition and, accordingly, has been expanded and revised to include new information. Both the text and the illustrations remain exceedingly lucid. Although the book has been extensively rewritten, the excellent material on the conduct of normal and abnormal labors is essentially the same and remains as pertinent as before. The first section of the book, covering the anatomy of reproduction and development of the ovum has been voluminously expanded and an entire new chapter has been devoted to the cervix in pregnancy.

The chapters on antepartum care have been revised so that the recommended nutritional requirements now conform to lower caloric recommendations made since the preceding edition, and added information is given on complications of pregnancy in which diet is a factor and on sodium restriction in pregnancy. New chapters are devoted to fetal electrocardiography, placental dysfunction, Asherman syndrome and human genetics.

The brief new chapter on contraception gives a succinct survey of methods of family planning. It contains a startling error in the description of the rhythm method on page 1188 and, doubtless, this will be corrected in subsequent printings. The added chapter on human cytogenetics and congenital anomalies caused by chromosome abnormalities is a concise and beautifully explicit presentation of this material.

I believe that Dr. Greenhill and his thirty-two contributing authors have produced the most informative obstetrics textbook extant. It is, also, amazingly readable, with an extremely comprehensive bibliography, and it will undoubtedly enjoy the well-deserved popularity of its predecessors.

MARGARET PAXTON VELLER, M.D.

Pediatric Procedures. By Walter T. Hughes, Jr., M.D., Assistant Professor of Pediatrics, University of Louisville School of Medicine. 200 pages. Philadelphia: W. B. Saunders Company, 1964. $7.50.

Congratulations to Dr. Hughes for writing such a fine book on pediatric procedures. It is clear cut, in detail, and beautifully illustrated. The book binding is very colorful in rose and black with large print which makes for easy reading. The arrangement of the contents, index, and references is excellent and the historical medical data is informative and very interesting.

The procedures covered are for office and hospital use, beginning with the simplest, the preparation of the patient, and going through to the most difficult, the cardio-vascular system and the central nervous system.

This book should be of interest and very useful to all physicians, house physicians, interns, medical students, and nurses, whether dealing with pediatrics or not. Dr. Hughes gives particular attention to minimizing pain, discomfort, and proper restraining of the little patient, making these procedures easier and more successful for the doctor, the nurse, and the patient.

Having practiced pediatrics before this era of such helpful and life saving techniques and procedures, it gives me great pleasure to thank Dr. Hughes and to recommend his book without reservations.

SAM L. BRISTER, M.D.

Blood Program in World War II. By Maj. Gen. Douglas B. Kendrick, M.C. 922 pages with illustrations. Washington: Government Printing Office, 1964. $8.00.

This is one of a series of historical volumes concerning various aspects of medical practice as affected by World War II. It is a very detailed, often tediously so, account of the development of blood transfusion services in the armed forces during World War II and the Korean War. The latter addition seems to be very appropriate.

The officers concerned with compiling this volume are true historians, however, this being exemplified best by a statement by Gen. Heaton in his foreword in which he states ". . . I have taken the position that this history must be written with complete candor and frankness, not only because a history is worthless if it is not honest but also because we must spell out the errors of the past so clearly that the same mistakes cannot be made again." Mistakes and errors in judgment are freely admitted. Some of these include (1) over-reliance on the use of plasma, (2) failure to recognize advances in this field made by others, notably the Spaniards during their Civil War of 1936-39, and (3) also, the British, noting they had set up a program for whole blood transfusions several months prior to the outbreak of hostilities in September 1939.

Our involuntary entry into the war found us somewhat unprepared. When the "sleeping giant" finally awoke, however, rapid advances were made. This involved tremendous problems in logistics since we were truly in a world war involving European, African, and Pacific fronts. During this period of time advances were made which have had a profound influence on the development of blood banking as we know it today.

The outbreak of the Korean unpleasantness again found the armed forces woefully unprepared to meet their needs regarding blood. In December 1951, President Truman set up, under the auspices of the Office of Defense Mobilization, a "National Blood Program." The coordinating agency was at that time the American Red Cross, which soon became enchanted by term "National Blood Program."

As indicated above, the purpose of a good history is two fold: (a) for documentation and (b) to record events in such a fashion as to cause people to consider the effects of past actions on future eventualities.

There have developed in this country several "systems" of blood banking. The first of these is the hospital blood bank which relies mainly upon replacement donors, that is from relatives and friends, filling the needs of patients receiving blood transfusions. The second type is the so-called "community blood bank" under which system a central blood bank in a "community" of varying size acts as a central agency to furnish blood for varying numbers of hospitals in its area. These vary from extremely small to quite large, such as banks in California which cover several vast mountainous counties in the Northern area. Another type of blood bank is the so-called "commercial blood bank," or more appropriately stated, one that utilizes nothing but paid donors. In other words, a person comes into the blood bank to donate his blood for a certain fee, and in turn the blood is transmitted to another agency for a given monetary fee. In this area, there have been certain abuses, but the fact remains that there are certain so-called "commercial" blood banks that are performing a valuable service.

The American Association of Blood Banks, a rather polyglot organization, has joined certain members of all of the above mentioned groups into a nationally functioning agency. All banks involved must meet certain standards and be inspected by people knowledgeable in the field. Most of these inspected blood banks belong to the so-called "Clearing House Program" under which blood or blood credits can be exchanged nation wide.

The American Red Cross also has a blood program which it is constantly trying to expand. The development of this program has closely adhered to the first law of Parkinson, which can be stated in several ways. One interpretation of this law is that bureaucracies are self-perpetuating and self-reproducing in an amoeba-like manner. Principles of genetics also apply, specifically that of the appearance of spontaneous mutations, exemplified by: (1) Failure to adhere to certain agreements made with medical organizations, (2) Establishment of blood programs in communities without consultation with or agreement of local medical societies, and (3) A recent venture into the blood assurance program for employees of a large insurance firm.

Unquestionably, there is a certain amount of competition among the above mentioned agencies. The fact remains, however, that there is a need for each type of blood transfusion service, especially considering the possibility of another national emergency which might be a nuclear holocaust.

KENNETH M. HEARD, M.D.

ACS Inaugurates Dr. Bell as President; Names Dr. Archer New President-elect

Dr. Warren N. Bell of Jackson was inaugurated 1965-66 president of the American Cancer Society, Mississippi Division, at the recent annual meeting at Jackson. Dr. John G. Archer of Greenville, a past president of the state medical association, was named president-elect.

The annual session was under the gavel of Dr. Richard G. Burman of Gulfport, 1964-65 president, who continues to serve in the new organization year as chairman of the Executive Committee. Featured speakers at the meeting were Drs. W. Lane Williams, Glenn Gentry, and David Owen, all of the University Medical Center at Jackson.

In his annual report, Dr. Burman cited accomplishments of the Mississippi Division in the fields of public and professional education. He said that the society will soon initiate a five year program to commit its resources in a stepped up attack on cancer of the uterus, colon and rectum, breast, oral cavity, lung, and skin. He pointed out that cancer of these six sites constitutes 60 per cent of all cancer cases and accounts for 48 per cent of all cancer deaths.

New officers, elected by the society's Board of Directors, are Drs. Bell, president; Archer, president-elect; Guy T. Gillespie, Jr., of Jackson, first vice president; M. B. Howorth of Oxford, vice president, northern area; Mrs. Cayce Ellard, Jr., of Kosciusko, vice president, central area; and Mr. Charles Pringle of Biloxi, vice president, southern area.

Other officers are Mrs. Leland Speed of Jackson, secretary; Mr. A. Ray Tillman of Jackson, treasurer; Mr. Charles Bailey of Jackson, assistant treasurer; Dr. J. Ralph Noonkester of Hattiesburg, chairman of the Board of Directors; and Dr. Burman who is chairman of the Executive Committee.



American Cancer Society officers for 1965-66 are, seated from the left, Drs. Warren N. Bell, Richard G. Burman, Guy T. Gillespie, and J. Ralph Noonkester. Standing, from the left, are Charles M. Bailey, A. Ray Tillman, Mrs. Cayce Ellard, Jr., Charles Pringle, and Dr. M. B. Howorth.

Call Issued for Scientific Exhibits

The first call for scientific exhibits for the 98th Annual Session of the association to be conducted at Jackson, May 9-12, 1966, has been issued by the Council on Scientific Assembly.

Dr. James L. Royals of Jackson, the council chairman, said that applications for scientific exhibit space should be sent to the association as soon as possible to assure full and complete consideration by the Committee on Exhibits. Applications, he said, may be in letter form and should specify the amount of wall space required in linear feet, the subject of the exhibit, and special requirements for electrical service. Photographs or sketches are helpful to the committee.

Under council policy, scientific exhibits are limited to those presented by members of the association, invited guests, and recognized medical institutions and organizations.

Members of the association compete for the association's Scientific Achievement Award, a bronze medallion, presented annually to the exhibit adjudged best. Tentative plans call for the committee to meet as exhibit applications are received. Applications should be mailed to the assocation at 735 Riverside Drive, Jackson, Miss. 39216.

1965 AMA-ERF Appeal Set for October

The 1965 American Medical Association Education and Research campaign in Mississippi has been announced by officials of the state medical association and University of Mississippi School of Medicine. Drs. Raymond F. Grenfell, chairman of the association's Committee on AMA-ERF, and Robert Q. Marston, vice chancellor of the University and dean of the medical school, said that the campaign would be conducted from October 16 through December.

Voluntary contributions in 1964 from Mississippi physicians were just under the $9,000 mark, Dr. Grenfell said, pointing out that last year's total of gifts exceed that of 1963 by more than 15 per cent. UMC received about $11,500 in unrestricted funds from the private program. Nationally, the medical profession gave $1.3 million in 1964 to the schools through AMA-ERF.

Drs. Grenfell and Marston said that the campaign will include direct communication to Mississippi physicians from the University, the medical alumni group, and the state medical association.

Prairie Society Holds Initial Meet

Physicians of Clay, Lowndes, Noxubee, and Oktibbeha counties met at Starkville on Sept. 28 in the first of a series of organizational meetings to establish the new Prairie Medical Society. Charter of the new group, formerly a part of the Northeast Mississippi Medical Society, was approved at the 97th Annual Session of the state medical association in May. The charter will be effective Jan. 1, 1966.

Thirty-six of the 46 members in the four counties were present, and a provisional organization was authorized. Chairman is Dr. G. Spencer Barnes of Columbus, and Dr. J. M. Griffith of Columbus was named provisional secretary-treasurer.

County chairmen are Drs. John R. Mullens, Jr., of West Point for Clay County; Frank B. Hays of Columbus for Lowndes; Lawrence B. Morris of Macon for Noxubee; and Dempsey C. Strange of Starkville for Oktibbeha.



Provisional officials of the new Prairie Medical Society are, from the left, Drs. Dempsey C. Strange, Frank B. Hays, G. Spencer Barnes, J. M. Griffith, and John R. Mullens, Jr.

The provisional group will develop by-laws and a suggested permanent organization which will be considered by another membership meeting on November 9. The formal charter meeting will be conducted Dec. 15 when state President Everett Crawford, other officers and trustees will be present.

Memorial Scholarship Honors Dr. Rush

The Central Methodist Church of Meridian has established a permanent memorial scholarship fund in honor of a past president of the Mississippi State Medical Association. The H. Lowry Rush, Sr., scholarship program was announced by the official board of the church and will offer a minimum of $500 annually. The church will budget $1,200 each year to build the fund.

Contributions already made to the church in memory of Dr. Rush have been placed in the fund, and spokesmen said that the core amount would be "several thousand dollars in the near future." Scholarships will be awarded to young people preparing for the ministry or other church-related work, they added.

When the fund has been built to more substantial proportions, the church plans to increase the amount of annual scholarships. Recipients will be named by a special committee of the church board.

The late Dr. Rush, who died June 20, 1965, was a member of the Central Methodist Church for 50 years and served as chairman of its official board for 10 years. He was delegate to the Mississippi Conference of the Methodist Church for 14 years, and he served as district steward, chairman of the building committee, and as a member of many local church committees.

Dr. Rush served as president of the state medical association during the 1942-43 year.

Typhoid Shots Are Discontinued by SBH

Vaccination against typhoid fever as part of routine immunization has been discontinued by the Mississippi State Board of Health, according to Dr. A. L. Gray of Jackson, executive officer.

"In view of what we consider a successful public health control program in recent years against the once dread disease," Dr. Gray said, "mass vaccination is being discontinued." He added that "with continuing improvement in sanitation, particularly in the safety of food and water supplies, the risk of typhoid outbreaks in our state is extremely low."

Local health departments at county level have averaged giving more than 250,000 typhoid vaccinations annually. Discontinuation of this phase of routine public health immunization will free nursing and clerical personnel for activities in more critical program areas, Dr. Gray said.

There will, however, be no discontinuation of the typhoid immunization program in carrier areas where the State Board of Health lists 140 registered carriers in 49 counties, 16 of which list only one carrier each. In the calendar year 1964, only seven cases of typhoid fever were reported in Mississippi, and these were confined to five counties.

The new program will be limited to communities where typhoid cases are deemed likely to occur, where water supplies may have been contaminated, and individuals considered unusual cases or those who travel internationally.

AMA Conference On Air Pollution

Air pollution and chronic respiratory diseases will be attacked as interrelated problems during the American Medical Association's first Air Pollution Medical Research Conference to be held in Los Angeles at the Ambassador Hotel, March 2-4, 1966.

In addition to the AMA, six other medical and health organizations are mobilizing behind what may well be the largest concerted campaign to be conducted by the medical profession against these problems to date.

The national cooperating organizations include the American College of Chest Physicians, the American Thoracic Society and the United States Public Health Service. The state and local organizations, representing one of the nation's most acute air pollution problem areas, include the California State Department of Public Health, the California Medical Association and the Los Angeles County Medical Association.

"Air pollution is one of our most serious environmental health problems," Charles C. Edwards, M.D., director of the AMA Division of Socio-Economic Activities, said. "Unlike most infectious diseases which today affect only a comparatively few people at a time, a persistent and intense smog problem affects all persons in the urban environment at the same time, regardless of where they live."

International medical, health and engineering scientists engaged in research bearing on air pollution from such countries as England, Japan, France and Italy will be among the approximately 40 participants to present papers.

Hodgkin's Disease To Be Seminar Subject

The latest clinical and research information on Hodgkin's Disease will be presented at a symposium, co-sponsored by the American Cancer Society and the National Cancer Institute, to be held Monday, Nov. 22, 1965, at the New York Hilton Hotel in New York City.

All interested physicians, medical students, and investigators are invited to attend this program which will emphasize the clinical management of Hodgkin's Disease. There is no advanced registration or registration fee.

For further information, write: Dr. Jack W. Milder, Research Department, American Cancer Society, Inc., 219 East 42 St., New York, N. Y. 10017.

Pfizer Offers Course On Blood Banking

The first programmed self-instructional course on blood banking designed specifically for laboratory technologists is now available from Pfizer Diagnostics, department of Chas. Pfizer & Co., Inc.

The course, consisting of three booklets, is designed to provide an introduction to the fundamental theories and procedures of modern blood banking. It is also intended to serve as a review for technologists who already have experience in blood banking.

The first booklet, or Part I, covers the ABO Blood Group Systems; Part II covers RH Blood Group Systems; and Part III covers irregular antibodies.

Programmed instruction is a system of learning in which the student progresses from simple to complex material in a series of individual steps. Each step incorporates what has been learned in the previous step. The instruction booklets are broken down into a series of frames which the student completes one at a time. As he completes each frame, the knowledge he has acquired is used in the next frame. Thus, new knowledge is based upon what has been learned before.

In addition to the instructional frames, the course includes a series of quizzes with which the technologist can test himself on his understanding of the material. The three booklets require about 14 hours of study.

SKF Speakers Roll Up Record

Speech makers for Smith Kline & French Laboratories passed a significant milestone recently with delivery of the 10,000th talk in the company's campaign to tell the story of the pharmaceutical industry to the American people.

In Mississippi, Smith Kline & French speakers have given 52 talks before audiences totaling more than 1,900 persons. About half of these speeches were arranged through pharmacists and physicians.

Logging more than 4,000 hours on platforms in 48 states and the District of Columbia during the past six years, SK&F's trained speakers have addressed more than 400,000 persons face-to-face and reached several million others through radio and television.

Smith Kline & French launched its Speakers Bureau program in 1959 in the belief that one of the best ways to tell the story of the drug industry's role as a member of the health team is to talk to people directly.

"The Speakers Bureau is an immensely successful method of creating better understanding not only of the pharmaceutical industry, but also the other members of the health team, medicine and pharmacy," said G. Frederick Roll, Director of Public and Industry Affairs for Smith Kline & French.



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"Yes, I tested your product and found it effective and safe, but that was before you named it 'Grandma Brown's Old Fashioned Bellyache Elixir!' "

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION
JACKSON, MISSISSIPPI

December 1965

Dear Doctor:

Fourteen new medical schools will be opened in the U.S. by 1970, marking the current decade as medical education's biggest era of expansion. This will bring to 101 the nation's total of schools of medicine, an increase of more than 30 per cent in just 25 years. Eight of the new institutions will have the full four year curriculum.

> Biggest problem will not be money but staffing the new schools with top quality facilites. Almost 1,000 additional students will be able to enter training by 1970. Overall growth is dramatized by increase from 77 in 1945 to 101 by 1970.

The makers of Geritol have been ordered by the Federal Trade Commission to ease up on the "tired blood" pitch to the American people. FTC ruled that TV commercials and newspaper ads falsely represented the patent medicine as an effective remedy for all cases of tiredness and that run-down feeling.

The 1st Session of the 89th Congress went down in the record books as the most active on health legislation of any in history. Of 16,882 introductions, 950 were concerned with medicine, patient care, education, research, and public health. Major enactments ran the gamut from air pollution to Medicare and covered most of LBJ's health program.

If anybody wonders whatever happened to the old family doctor, the answer is easy: He's not old anymore. So says the American Academy of General Practice after an age group study of its 29,000 members who represent about half of the nation's GP's. The modal (most frequently occurring) age is 41, and half are under 50. AAGP rolls carry three under 25 and eight over 90.

Mississippi parents of first graders have been urged by State Board of Health to give consent for tuberculin testing of children. Incidence of tuberculosis is reported increasing, with 3 out of 100 children found to be potential cases. Of more than 21,000 in age 5-to-9 bracket tested this year, a 3.9 reactor rate was observed.

Sincerely,

Rowland B. Kennedy
Executive Secretary

DATELINE - MEDICAL AMERICA

ACOG Will Study Maternity Care In United States

Chicago - The American College of Obstetrics and Gynecology will study the problems of "the large number of women who receive little or no prenatal care, particularly in large urban centers," perinatal mortality, and increasing incidence of prematurity. With active planning already initiated, study will soon be underway with a grant from the Children's Bureau of Department of HEW. Inquiries will also cover professional training, care quality, and utilization of maternity beds in U.S. hospitals.

Drug Maker Pioneers In Recovery Of Damaged Stocks

Philadelphia - Smith, Kline and French has contracted with nation's principal salvage companies to return SKF products damaged by fire or which have been acquired by bankruptcies. Purpose of policy is to prevent distribution of damaged drugs and to keep products from illicit channels of black market trade. Distressed stocks, including partially filled bottles of SKF drugs, will be set aside for negotiated repurchase by SKF. The Philadelphia firm is the first drug maker to set up such a public interest program. All reclaimed stocks will be destroyed.

Push For Restrictive Experimental Animal Bills Is On

Washington - When Congress reconvenes in January, 25 bills placing severe restrictions on procurement and utilization of experimental laboratory animals will be pending on the carryover agenda. Legislation is sponsored both by serious groups and lunatic fringe of antivivisectionists. Subject of bills is emotion-charged, and capitol hill observers warn of propaganda onslaught which is sure to come with new hearings.

RN's Are Recruited From Retirement In Novel Campaign

New York - A Nassau County nursing home for the aged has been successful in recruiting 110 diploma nurses from retirement, giving the 900 bed facility a bigger nurse staff than most Long Island hospitals. The novel campaign was aimed at nurses lost by attrition within last 10 years, offering part time employment along with full time jobs. Most nurses responding were those whose children were well along in school. Only brief retraining was found necessary.

JCAH Sets Nursing Home Accreditation Standards

Chicago - The Joint Commission on Accreditation of Hospitals has approved new sanction standards for nursing homes, bringing together for the first time the approval programs of the American Hospital Association and the National Council for Accreditation of Nursing Homes. The new program will be activated early in 1966 and presumably will assist greatly in the upgrading of extended care facilities for which Medicare benefits will be authorized.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
December 1965, Vol. VI, No. 12

ORIGINAL PAPERS

Dysplasia Epiphysealis Multiplex

BUFORD YERGER, JR., M.D., and
GEORGE D. PURVIS, M.D.
Jackson, Mississippi

Dysplasia epiphysealis multiplex is characterized by short stature, stubby hands, and frequent abnormalities of the knees with either genu varum or genu valgum. The basic defect is in the formation of the epiphysis which arises from multiple rather large ossification centers resulting in an irregular joint surface, predisposing to arthritis which becomes symptomatic at about age 30 or 40. The authors present five cases from the same family covering three generations.

In 1912, Barrington-Ward published an article in the *Lancet* entitled, "Double Coxa Vara and Other Epiphyseal Abnormalities." These cases probably represent the first reported cases of dysplasia epiphysealis multiplex. It was not until 1937, however, that Fairbanks named the entity and defined it as a clear-cut clinical syndrome.

Dysplasia epiphysealis multiplex is characterized by short stature, stubby hands, and frequent abnormalities of the knees with either genu varum or genu valgum. The basic defect is in the formation of the epiphysis which arises from multiple rather large ossification centers resulting in an irregular joint surface, predisposing to arthritis which becomes symptomatic at about age 30 or 40. The hips are always involved, and most series report involvement of the shoulders. Other joints involved are the knees, ankles, metacarpals, metatarsals and, recently, the back has been reported.

The five cases presented here are all from the same family covering three generations.

CASE ONE

This patient was a white male who died at age 81 of a heart condition. He was described as a small man about five feet tall who began to have pain in the hips at about age 40. The x-rays were made at age 70 (Figure 1) at which time he was complaining of severe hip and back pain and was reported to have had a marked limp of a waddling type. He had no symptoms in the other joints and no other joints were x-rayed.

CASE TWO

Case two involved a white male age 58, a retired store keeper. This patient was the first son of the patient in case one. This man was also short and had had progressive pain and limitation of motion in the hips since some time in his early thirties. The patient was discharged from the army in 1945 with a 20 per cent disability for degenerative arthritis of the hips. Recent x-rays (Figure 2) showed severe degenerative changes with flattening and irregularity of the femoral heads. The patient is now completely incapacitated and cup arthroplasties of the hips have been recommended. His other joints are asymptomatic. His lumbar spine x-rays were normal, but no other joints were x-rayed.

From the Department of Orthopaedic Surgery, Mississippi Baptist Hospital (at the time of manuscript acceptance, Dr. Yerger).

CASE THREE

Case three involved a white female age 43 who had had pain in both hips as long as she could recall. She was five feet tall and had short, stubby hands. X-rays made at age 36 (Figure 3) showed typical flattening and irregularity of the femoral heads. In 1959, the patient was seen with a complaint of pain in the right shoulder. X-rays at that time showed rather minimal changes in the right humeral head. It was not felt that this epiphysis was involved with the disease process.



Figure 1

In May, 1964, the patient returned because of severe progressive pain in both hips, greater on the left side. She stated that she was forced to go to bed for weeks at a time because of the severity of the pain and was able to walk only a short distance. X-rays showed marked progression of the degenerative process in both hips. Bilateral Crawford Adams arthroplasties were carried out in the summer of 1964 (Figure 4) and she has had about 75 per cent relief of pain in both hips.

CASE FOUR

This was a white female age 22. She was the daughter of case three. Her height was four feet and ten inches. She was first seen at the age of



Figure 2

five years with severe unilateral genu varus and internal tibial torsion. X-rays (Figures 5 and 6) then showed severe involvement of both hips and ankles which were asymptomatic. The genu varus and internal tibial torsion did not respond to conservative treatment and an osteotomy of the proximal tibia was necessary. She has remained asymptomatic.

CASE FIVE

This patient was a white male age 28, a clerical worker. He had had pain in the hips since age 12 or 13, more severe on the left side. He had pain after long walks and heavy lifting and had a catching sensation in the hips. Stiffness of the hips made it difficult to lace his shoes. The episodes of pain and disability were becoming more frequent and more severe. On examination, he had 45 degrees hip flexion contracture on the right and a 15 degree contracture on the left. His gait was wadling in character, and there was an obvious lumbar

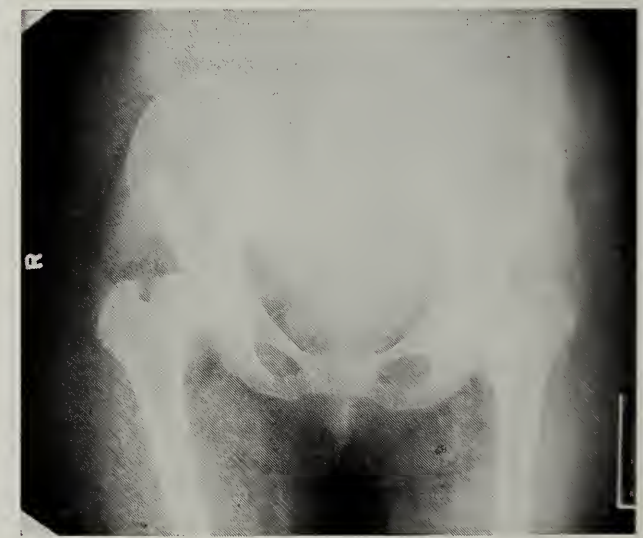


Figure 3

lordosis. X-rays (Figure 7) showed the characteristic changes noted in the others. Though his hands were short and stubby, there were no x-ray changes.

DISCUSSION

The cases presented here are typical of dysplasia epiphysealis multiplex. The patient's early growth and development are normal. Medical advice may be sought at ages four to six for waddling gait, genu varus or genu valgum (bow legs or knock knees). Pain is uncommon at this age. Hip symptoms begin to develop at about age 30 to 40 with severe degenerative changes taking place in the femoral heads. On examination, short stature and stubby hands are noted, as well as limitation of motion in the hips.

TREATMENT

Weinberg, *et al.,* report, in a series of 42 cases, that the symptoms were not as severe as one would expect from the x-rays and that surgery was not justified in most. However, two of the five cases reported here have already required surgery and two others are scheduled.

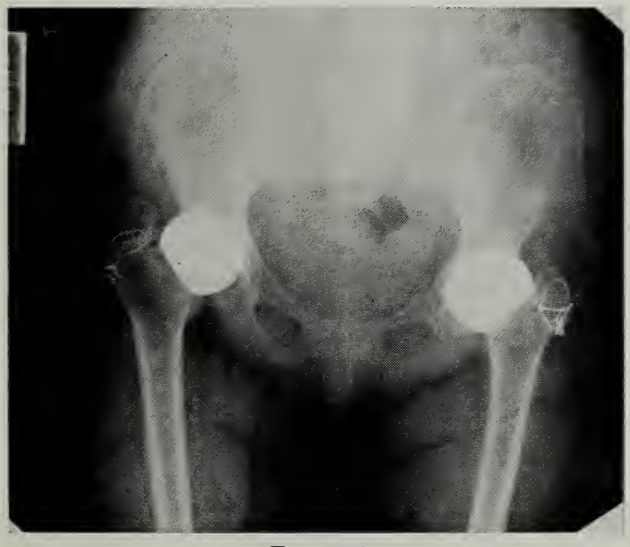


Figure 4

There is no indication for immobilization in these patients when the entity is first recognized. Osteotomies may be required in the young for angular or rotational deformities and arthroplasties may be indicated in the 30's and 40's when arthritic symptoms become apparent.

PATHOLOGY

Pathologically, the dysplasia is a chondrodystrophy effecting only the cartilaginous epiphysis. The diaphyses are never involved. The disorder is always symmetrical, an important differential diagnostic point. The basic defect is the failure of



Figure 5

the epiphysis to ossify normally. It arises from numerous centers which give it a mottled or irregular appearance. The earliest deviation from normal is a delayed appearance of the epiphysis. When the femoral epiphysis appears between the ages of one and two, it is noted to be fully developed, irregular in shape and in density. These

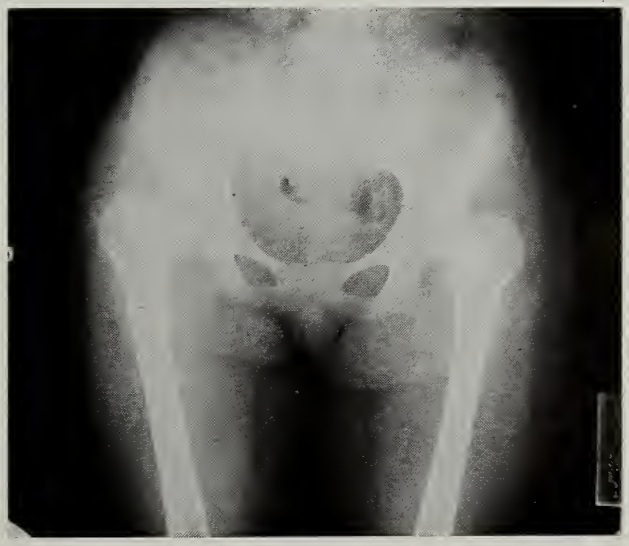


Figure 6

multiple ossification centers gradually fuse, and radiographically there is progressive improvement, but the joint surface still remains irregular. There is some disagreement about the closure time of the epiphysis, some authorities saying it is premature, others saying it is delayed.

HEREDITY

Maudsley, in a study of three generations of one family in which 10 of 18 had the condition, concluded that the disorder was due to a Mendelian unifactorial dominant gene. He considered it unifactorial because the affected is clearly distinguished from the unaffected and dominant because of the ratio of one to one. He felt that if it

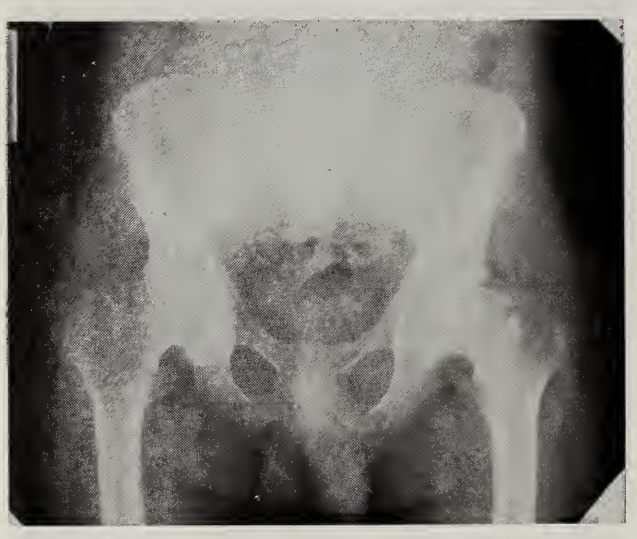


Figure 7

had been recessive, it would require that the normal parents marrying into the family would carry it and this would be unlikely in a disease so rare as this. Contrary to earlier reports, the disorder is definitely familial. Weinberg, *et al.,* report 42 cases in 107 members of one family covering four generations. This is also documented in other series.

DIFFERENTIAL DIAGNOSIS

Dysplasia epiphysealis multiplex may masquerade under the title of bilateral Legg-Perthes disease, Morquio's disease, stippled epiphyses, cretinism, gargoylism, achondroplasia, osteopoikilosis, and osteopetrosis.

Legg-Perthes disease may be indistinguishable from dysplasia epiphysealis multiplex on a single joint x-ray. However, according to Jackson, Hanelin, and Albright, multiple symmetrical osteochondritis does not occur in Legg-Perthes disease. Legg-Calve-Perthes disease is acquired, frequently painful, and usually only one epiphysis is involved. (Legg-Perthes is bilateral in about 10 per cent of the cases.) Fairbank suggests that in cases of suspected bilateral Legg-Perthes that other joints be x-rayed to rule out the possibility of dysplasia epiphysealis multiplex. Other differentiating factors are that Legg-Perthes originates in a previously normal epiphysis and follows a very typical course of increased epiphyseal density, fragmentation, absorption, and eventual return to normal bone structure with residual joint deformity.

Cretinism, the lack of thyroid hormone from an early age, may result in irregular fragmentation which may simulate dysplasia epiphysealis multiplex. The hips are characteristically involved with coxa vara, flat heads, and short necks. Manifestations may also be seen in the knees, shoulders, pubic ramus, ischial tuberosity, femoral trochanters, and the spine. All epiphyses are late in appearing. These changes are accounted for by the delayed transformation of the cartilage into bone which can be hastened by thyroid replacement therapy.

MORQUIO'S DISEASE

Morquio's disease is a recessively inherited chondrodystrophy in which the spine bears the brunt of the deformity. There is usually a thoracic kyphoscoliosis, vertebral bodies are flat and irregular, and disc spaces are widened. The epiphyses of the larger joints are late in appearing, irregular and frequently are fragmented. The acetabula are shallow, wide and ragged.

Gargoylism is secondary to an abnormal macromolecular storage substance. Here the epiphyses are usually less fragmented, but are distorted in shape and the femoral heads are flattened. The acetabula are also irregular, disorganized, but less so than in Morguio's disease. The skull is abnormal. The fingers are abnormally long and permanently flexed. The vertebral bodies are short, rounded, and have irregular anterior surfaces.

Punctate epiphyseal dysplasia or so-called "stippled epiphyses" is a disease of infancy terminating fatally before the end of the first year. Stippling of the epiphyses is only one of the features which include abnormal deposits of calcium in the synovia and in the tracheal ring.

The short stature of patients with dysplasia epiphysealis multiplex may cause them to be confused with achondroplasia. The pathomechanics of the two disorders are vastly different. According to Philip Rubin, achondroplasia is a dysplasia of the epiphyseal cartilage plate while dysplasia epiphysealis multiplex is an epiphyseal dysplasia. Arthritis in achondroplasia is rare because hemi-

spherization of the epiphysis is unaffected. Other common characteristics of achondroplasia such as the trident hand, the unusually large head, and lumbar spine abnormalities are absent in dysplasia epiphysealis multiplex. Also according to Rubin, 90 per cent of the cases of achondroplasis are sporadic, whereas the familiality of dysplasia epiphysealis multiplex is well established.

SUMMARY

We have reported five cases of a familial disorder which is basically a chondrodystrophy characterized by abnormal ossification of the multiple epiphyses with subsequent irregularity and arthritis. It is characterized classically by short stature, stubby hands and frequent genu valgus. Its differentiation from Legg-Calve-Perthes syndrome, Morquio's cretinism, achondroplasia, gargoylism, and stippled epiphyses has been discussed. An awareness of the disorder is most important from the diagnostic standpoint in considering bilateral cases of Legg-Calve-Perthes disease. In such cases, it has been recommended that x-rays of the other joints be made to rule out the possibility of dysplasia epiphysealis multiplex. ★★★

421 South Stadium Circle (Dr. Purvis)

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HOUSE CALL HORROR

The harassed father of 11 children answered the front door bell one evening. Standing on the porch was a man with a little black bag. "I hope and pray," muttered the father, "that you're just the TV repairman."

—Don Rickles in Parade

Diagnostic Studies in Patients With Diastolic Hypertension

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To physicians not affiliated with a medical center, the diagnostic studies necessary in patients with diastolic hypertension may seem inordinately complicated. Actually, the diagnosis and prognosis in such patients can be accurately determined by use of the facilities of a modestly equipped laboratory combined with diagnostic acumen. In approaching the problem, the physician must keep several questions in mind. Is the hypertension primary or secondary, benign or malignant, secondary to an emotional stimulus, or associated with vascular disease or other complications?

A thorough history and physical examination will provide many clues to diagnosis and prognosis. The age of the patient at onset is important. Primary or essential hypertension characteristically develops in persons between the ages of 25 and 40 years and is usually associated with a strong family history of hypertension. Weakness, particularly if episodic, suggests aldosteronism or Cushing's syndrome. Episodic pallor, headache, tachycardia, sweating, numbness, tingling, and coldness of the extremities suggest a diagnosis of pheochromocytoma. Sudden exacerbation of previously benign hypertension, particularly if associated with excess fatigue, loss of weight, and impairment of vision, frequently means that the process has become malignant.

A complete physical examination must include thorough evaluation of the optic fundi. This is most important in prognosis. The first clue to the accelerated (malignant) phase of hypertension may be the finding of hemorrhages, exudates, and blurred disk margins. Determination of blood pressure in the arms and one leg, simultaneously, is important in recognition of vascular complications and coarctation of the aorta. The presence of bruits in the neck, epigastrium, or femoral areas suggests associated vascular disease and the possibility of renal arterial stenosis. A central type of obesity, a prominent fat pad in the upper thoracic region of the back (the "buffalo hump"), and purplish abdominal striae are characteristic of Cushing's syndrome.

The diagnosis of primary hypertension is made only after all causes of secondary hypertension have been excluded. Out of the varied causes of secondary hypertension, these lesions are considered to be potentially curable: unilateral pyelonephritis with a contracted kidney, coarctation of the aorta, Cushing's syndrome, pheochromocytoma, primary aldosteronism, and renal arterial stenosis. The authors write that curable lesions should be looked for in every patient with elevated diastolic blood pressure. Diagnostic studies are discussed in detail.

Electrocardiographic demonstration of left ventricular hypertrophy or strain indicates persistently elevated blood pressure. On one routine erect roentgenogram of the chest the size of the heart may be determined by the Ungerleiter table of averages in order to evaluate early or minor degrees of enlargement. Notching of ribs is a classic sign of aortic coarctation.

Excretory urography is frequently a valuable diagnostic tool. Its use in such specialized problems as renal arterial stenosis will be discussed later. An excretory urogram that demonstrates the small kidney of unilateral pyelonephritis or the

From the Department of Internal Medicine, Ochsner Clinic.
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hydronephrotic renal pelvis of chronic obstruction may lead to a cure of hypertension by the proper surgical procedure.

Finally, the general laboratory is of immeasurable usefulness from both diagnostic and prognostic standpoints. Specific studies in various forms of hypertensive disease which are considered "curable" will be discussed in detail later. Some of these studies are done only on suspicion that the patient has a specific form of secondary hypertension. Others are done as part of any general evaluation. These include urinalysis, a measure of renal function (urea clearance), and serum electrolyte determinations (sodium, potassium, chloride, and carbon dioxide content). Persistent anemia suggests chronic renal disease. An elevated erythrocyte sedimentation rate might indicate active pyelonephritis.

KIDNEY EVALUATION

Since hypertension frequently accompanies renal disease, thorough evaluation of the kidneys is indicated. In the presence of a normal blood urea nitrogen value, this is best done by the Addis test and by the 24 hour quantitative urine protein determination. Chronic glomerulonephritis in its latent stage may be manifested only by elevation of the diastolic blood pressure. Significant elevation of erythrocytes in the Addis test will confirm this. Leukocytosis out of proportion to the erythrocyte count in an Addis study, combined with a low specific gravity or osmolarity, might be the only clue to chronic "smoldering" pyelonephritis.

The diagnosis of primary hypertension is made only after all causes of secondary hypertension have been excluded. These include: disorders of the central nervous system (brain tumor, tabes, poliomyelitis); renal lesions (glomerulonephritis, pyelonephritis, polycystic disease, vascular abnormalities, ureteral obstruction); adrenal and chromaffin abnormalities (pheochromocytoma, Cushing's syndrome, primary aldosteronism); vascular abnormalities (aortic coarctation, renal arterial occlusion); collagen diseases (periarteritis nodosa, disseminated lupus erythematosus, thrombotic thrombocytopenic purpura); toxemia of pregnancy; and acute intermittent porphyria. Of these, the following are considered to be potentially curable lesions:

1. Chronic pyelonephritis is often difficult to diagnose. The presence of leukocytes in the urine, even intermittently, together with mild proteinuria (less than 2 gm. in 24 hours) and elevated erythrocyte sedimentation rate, should make one sufficiently suspicious of this disease to obtain a urine culture. Demonstration, on excretory urography, of an atrophic pyelonephrotic kidney, with subsequent cure of the hypertension by its removal is a gratifying experience for the physician and patient alike.

2. Coarctation of the aorta should be suspected when the blood pressure obtained in the leg is lower than that simultaneously obtained in the arm. Murmurs may be heard in the chest anteriorly or posteriorly, and a "hum" may be detected when the stethoscope is placed directly over a rib. Demonstration of a small aortic knob together with rib notching on routine roentgenography of the chest lends confirmation. The typical lesion can be demonstrated by aortography and can be repaired surgically.

3. Pheochromocytoma is first suspected from the history. Characteristically, the patient complains of episodes of pallor, sweating, cold, numb extremities, and pounding headache. The hypertension may fluctuate or be sustained. The history, though typical when all of its facets are present, is so variable that every patient with diastolic hypertension should undergo tests for pheochromocytoma. These include the Regitine® test, performed when the baseline pressure is above 160/100, and the histamine test, which is performed when the blood pressure is below this figure. If a histamine test is to be done, one should have a syringe with Regitine ready in case a positive reaction sends the blood pressure soaring. Also, if the result of the histamine test is positive, a cold pressor test should be performed to exclude the possible hyper-reactor. Both the Regitine and histamine tests are subject to false positive and false negative reactions resulting from administration of drugs. For this reason, use of all drugs must be stopped for several days before performance of either test. Other screening tests include determining the 24 hour urinary excretion of vanyl-mandelic acid, and the urinary excretion of catecholamines. Both of these are performed after the patient has been on a diet which omits coffee, tea, and bananas for 72 hours. Elevated basal metabolic rate and impaired carbohydrate tolerance confirm the diagnosis. Treatment is surgical.

4. Cushing's syndrome is a rare disorder affecting the adrenal glands. The classic history is one of weakness, headache, polyuria, and mental disturbances. On physical examination one notes central obesity, the "buffalo hump," purplish striae, and hirsutism. In the acute stage the only changes may be in the face and may be erroneously diagnosed as angioneurotic edema.

The serum potassium concentration may be low and hypochloremic alkalosis may be present. Glucose tolerance is impaired. Definitive diagnosis depends on demonstration of abnormal urinary excretion of 17-ketosteroids and 17-hydroxycorti-

coids. Urinary excretion of 17-hydroxycorticoids is almost always elevated in patients with Cushing's syndrome. Excretion of 17-ketosteroids is generally lower than normal in the patient with an adenoma, normal or slightly elevated in patients with bilateral hyperplasia, and definitely elevated in those with adrenal carcinoma. Results of roentgenography are nonspecific. The sella turcica is almost always normal. General osteoporosis is the rule. Fractures of the spine are common. Treatment is surgical.

5. Primary aldosteronism was first described as a cause of hypertension in 1955. The incidence is still unknown. The classical picture is that of extreme muscle weakness, hypertension, hypokalemia, hypernatremia, and polyuria. Dilute alkaline urine is a late finding. It is important, however, to realize that the hypertension may precede obvious symptoms and chemical abnormalities by many years. The diagnosis should be suspected in any hypertensive patient who exhibits hypokalemia or a severe reaction to chlorthiazide preparations. If there is no contraindication and if aldosteronism is suspected, we use the following definitive diagnostic tests. The patient is given a high salt diet (actually 9 gm. of salt added to a select diet) for four days, the clearance of potassium being determined on the 24 hour urine culture obtained between the third and fourth days. Then, spironolactone is added to the regimen, 75 mg. four times a day for the next three days, after which the potassium clearance is again measured. The result of the test is considered positive if the clearance of potassium falls appreciably after the spironolactone has been added. The spironolactone is without effect on the potassium clearance of an apparently normal person since the high salt diet has completely suppressed his excretion of aldosterone.

6. Renal Arterial Stenosis. There is nothing to make one suspect renal arterial stenosis from the history or physical examination. Therefore, all patients with diastolic hypertension should have studies to exclude this important cause. These include excretory urography done in the dehydrated state and in the maximally hydrated state, I^{131} hippuran renography, the split differential renal function study, and arteriography.

Of these, we consider excretory urography the simplest for screening purposes. With the patient in the dehydrated state films are made at ½, 1, 2, 3, 4, 5, 10, 15, and possibly 30 minutes. The diagnosis is indicated by delay in the appearance of the contrast medium on the affected side as well as delay of "wash-out" from that side. Concentration of the contrast medium may never be as good on the occluded side. The hydrated study is predicated on the fact that because blood flow through the affected kidney is obviously slowed, it is inherently unable to elaborate dilute urine. Therefore, if the patient is given enough water to produce maximal diuresis, usually 1000 to 1500 cc., of tap water, the picture of the unaffected side is "washed out," and that of the affected side remains intact. Concentration on both sides occurs only if the patient has bilateral stenosis or if he is not excreting maximally dilute urine.

I^{131} hippuran renography requires special monitoring apparatus, and its performance is not feasible in most hospitals. It is also the least accurate of the screening studies.

Differential renal function studies involve determination of the U sodium/U creatinine ratio in the urine issuing simultaneously from each kidney. This requires ureteral catheterization with small catheters and collection of urine for two or three periods of 10 to 15 minutes. The patient should be well hydrated to insure adequate urinary flow. A positive result is indicated by pronounced reduction of the U sodium/U creatinine ratio on the involved side as compared with the uninvolved side. Aortography by the translumbar or retrograde femoral route, confirms the diagnosis, although special positioning (oblique or erect films) may be necessary to demonstrate the lesion. The diagnosis of segmental stenosis of a branch artery is frequently difficult to make, even with arteriography.

SUMMARY AND CONCLUSIONS

With increasing recognition of curable lesions in patients with diastolic hypertension, the physician should be aware of the various causes of secondary hypertension and should look for a curable lesion in every patient who comes to him with elevated diastolic blood pressure. Curable lesions include unilateral pyelonephritis with a contracted kidney, coarctation of the aorta, Cushing's syndrome, pheochromocytoma, primary aldosteronism, and renal arterial stenosis. Most of these will be suspected after a thorough history and physical examination. Screening diagnostic studies are available in any modestly equipped laboratory. Thorough diagnostic evaluation is also important for prognostic purposes and for selection of a course of treatment. ★★★

1520 Jefferson Highway

Acute Cholecystitis With Cholelithiasis In a Child With Hb-S Thalassemia

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SICKLE CELL ANEMIA, especially at a young age, gives rise to repeated hemolytic crises. These frequently manifest themselves in the form of acute abdominal complaints due to splenic infarcts, hepatic involvement or mesenteric thromboses. It is thus understandable that gallbladder disease is not immediately considered; all the more since cholecystitis in children is rare. Moreover, according to the data of Ulin *et al.* (1952)[1] there is a pronounced racial difference. Of the 43 cases of cholecystitis in children, only 3 cases were found in Negro children between the ages of 4 and 10. Kahle and Jackson (1953)[2] added two Negro children, aged 6 and 12 respectively to this number and also stressed the rarity.

Weens (1945)[3] investigated the frequency of the association of cholelithiasis with sickle cell disease in autopsy material. From this study, it appeared that the highest frequency (namely 9.5 per cent) was in the 0 to 20 years group. He compared this with the statistical data of Jaffe (1933)[4] of the overall incidence of cholelithiasis in Negroes. In Jaffe's statistics, however, the highest percentage lay above the young age group, namely above 40 years old (a significant and marked difference).

Recent publications of Mintz *et al.* (1955)[5] and Easton and Wright (1957)[6] brought attention to the association of repeated abdominal complaints caused by gallstones in sickle cell anemia. Mintz investigated 21 patients with sickle cell anemia up to the age of 20 years; gallstones were diagnosed twice and thus they obtained the same percentage, namely 9.5 per cent, as Weens with his autopsy material. These data suggest that the occurrence of gallstones at a young age can be an indicator of the presence of sickle cell anemia.

As there is little mention in the literature about the occurrence of gallstones in children with heterozygous hemoglobin states, namely, Hb-S thalassemia, it was of great interest to us recently to have had the occasion to study cholecystitis in a child with proven Hb-S thalassemia.

A case of Hb-S thalassemia presenting with acute cholecystitis and cholelithiasis is presented. The incidence and its significance with pathogenesis of gallbladder disease in Negro children is discussed. The management of sickle cell conditions is reviewed in reference to the case under discussion. This is the first known case report of acute cholelithiasis in a child with Hb-S thalassemia.

METHODS

Routine methods[7] were used for determination of hemoglobin, hematocrit, reticulocyte, white blood, and red blood counts. Peripheral Wright stained smears were studied for alteration in red and white cell morphology. Hemoglobin samples were prepared for electrophoresis according to the method of Thompson *et al.*[8] Electrophoresis was carried out as outlined in an earlier publication.[9] Quantitation of hemoglobin fractions was performed on DEAE cellulose chromatography as outlined by Huisman *et al.*[9] The solubility of the hemoglobin fractions in a reduced state was performed by the method of Itano[10] and the fraction subsequently designated as hemoglobin-S showed a decreased solubility in the reduced state. Hem-

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oglobin-F estimations were performed according to the two minute procedure of Chernoff *et al.*[11]

CASE REPORT

An 11-year-old colored female was referred by her local physician to the University of Mississippi Medical Center on Aug. 31, 1964, with a temperature of 101° F. orally and mild upper abdominal pain of 12 hours' duration. She had had similar bouts of abdominal pain for several years. Scleral icterus was noted two days prior to admission by the mother. There was associated nausea and chills.

The patient was known to have been anemic since the age of three at which time she was burned. Jaundice was also noted at this time. The anemia and jaundice continued intermittently and two years prior to admission she had an episode of severe back pain with inability to move her lower extremities. At that time a diagnosis of sickle cell anemia was made on the basis of a positive sickle cell preparation procedure.

Physical examination at the time of admission revealed a pale, jaundiced colored child with slight abdominal pain, temperature of 101° F., pulse 110, and blood pressure 120/75. Her weight was 81 pounds and height 4′ 9″ (57 inches). There was icterus of the sclera and dried nasal mucosa. A characteristic high tower type of forehead was observed. The chest was clear to percussion and auscultation. A Grade III systolic murmur was heard in the aortic area associated with tachycardia. The liver edge was palpable one cm. below the right costal margin and slight rebound tenderness was noticed in the right upper quadrant with radiation of the pain to the posterior flank. The spleen was not evident to palpation or percussion. Bowel sounds were normal.

Initial laboratory data revealed a hemoglobin of 9.7 gm. per cent, hematocrit 31 per cent, reticulocyte count 10.5 per cent, sedimentation rate 5 mm. per hour, white blood count 22,800/cm. Peripheral smear examination disclosed frequent target cells, 1+ hypochromia, 1+ polychromasia, 2+ macrocytosis, 1+ microcytosis, and 3+ anisocytosis. The monocytes and lymphocytes appeared toxic. Routine urinalysis revealed a specific gravity of 1.015, protein 1+, white blood cells 0-3, bilirubin 1+, and urobilinogen positive 1:40. A chest x-ray revealed the cardiovascular silhouette and pulmonary markings to be normal in appearance. Examination of the long bones revealed a slight increase in trabecular prominence without other definite significant abnormalities. In addition, an opacified gallbladder was seen appearing to contain numerous gallstones (see Figure 1).

The patient was placed on a soft diet, 400,000 units of penicillin, and 0.5 gm. of streptomycin intramuscularly given stat, as well as 200,000 units of procaine penicillin and 0.25 gm. of streptomycin intramuscularly every 12 hours.

On September 3, approximately three days after the admission, the pertinent findings were as follows: temperature 101° F., white blood count 19,500, alkaline phosphatase 50 K.A. units, bilirubin total 20.6 mg. per cent with a direct component of 10.6 mg. per cent. A surgical consultant saw the patient at this time and felt that a cholecystectomy and operative cholangiogram should be performed. On September 5, the temperature was 99.6, white blood count 8,500, stools of normal color, but urine was positive for bile (4+) and urobilinogen 1:80. The patient was taken to surgery and under a general anesthesia a cholecystectomy and cholangiogram was performed. The liver was noted to be enlarged to five fingerbreadths below the right costal margin and was



Figure 1. Gallstones on the plane film of the abdomen; numerous facetted radiolucent gallstones with radiopaque rims are noted in the right upper quadrant of the abdomen. A slight increase in trabecular pattern is also noticed in vertebrae and ribs.

slightly pale with scarred areas. The gallbladder was of normal size but filled with myriads of calcium bilirubinate stones ranging in size from 1 mm. to 8 mm. with the vast majority being in the range of 2 to 3 mm. The gallbladder had an unusually long neck being approximately 4 cm. long. The remaining cystic duct was approximately 8 mm. long and the operative cholangiogram showed ready flow of dye into the duodenum with a normal-sized biliary tree. In one very remote intrahepatic branch of the right hepatic duct, two small radiolucent areas were seen.

TABLE 1

PERTINENT HEMATOLOGIC DATA OF PATIENT UNDER STUDY

Hb-gm %		9.7
Hct %		31
RBC 10^6 cmm		3.00
MCV $c\mu$		103
MCH $\gamma\gamma$		32
MCHC %		31
Anisocytosis		+++
Poikilocytosis		++
Microcytosis		+
Macrocytosis		++
Target cells		+++
Reticulocytes %		10.5
Serum iron mcg %		175
Iron Binding Capacity mcg %		310
Cr^{51} (T/2) days		10.5
Hb electrophoresis		SF
Solubility %		44
Alkali denaturation % Hb-F		19.5
Column Chromatographic Quantitation		
Hb-A_2 %		3.9
Hb-S %		75.5
Hb-F %		22.6
Osmotic Fragility		*Normal*
10% hemolysis	.48	.50
50% hemolysis	.41	.47
90% hemolysis	.34	.40

During surgery, no blood was administered and blood loss was estimated at 250 cc. The hemoglobin fell from 9.1 gm. per cent to 8.1 per cent. The chest was clear to percussion and auscultation, urinary output was good and first postoperative sample was negative for bile. Twelve hours after surgery, the serum bilirubin had fallen to 9.7 mg. per cent with a direct component of 3.7 per cent. Temperature at this time was 101.6° rectally.

The patient was placed in an oxygen tent and blood pressure, pulse, and respiration were taken every 15 minutes. A careful check was kept for the appearance of cyanosis of the nail beds and mucus membranes. Intravenous fluids consisting of 10 per cent dextrose in water and normal saline were given.

On Sept. 14, liver function studies revealed an SGOT of 28 units, alkaline phosphatase 19 K.A. units, total bilirubin 5.3 mg. per cent with direct fraction of 2.0 mg. per cent. On the 10th postoperative day, the patient was discharged from the hospital.

The pertinent hematologic data pertaining to the patient under study is presented in Table 1. The results of hemoglobin electrophoresis are seen in Figure 2 and are compared with a known homozygous Hb-S disease and sickle trait carrier.

DISCUSSION

The diagnosis of homozygous Hb-S disease in the patient was questioned because of several unusual presenting features. These were as follows: (a) a hemoglobin level of 9.7 gm. per cent, with no evidence of dehydration, well above the established range for homozygous Hb-S disease of 5-8 gm. per cent, (b) the presence of numerous target cells in the peripheral smear, (c) absence of hyposthenuria, (d) a normal Cr^{51} scan over the liver and spleen (ratio 2:1), (e) Hb-F of 19.7 per cent, and Hb-A_2 of 3.9 per cent. In homozygous Hb-S disease, Hb-F is usually between 0-16 per cent and Hb-A_2 2.8 ± 0.4 per cent.

The findings showing the presence of a gene for Hb-S were (a) electrophoretic pattern (Figure 2), (b) reduced hemoglobin solubility, and (c) a positive sickle cell preparation. The presence of a gene for classical beta thalassemia manifests itself by (a) quantitation of Hb fractions revealing an elevated Hb-A_2 of 3.9 per cent (normal 2.8 ± 0.4

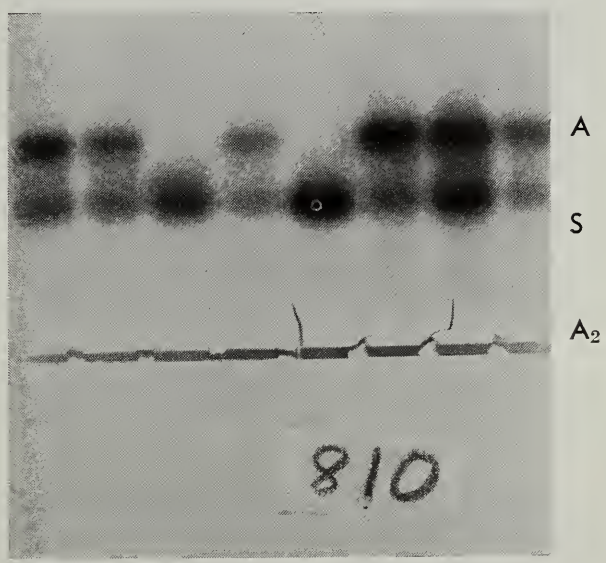


Figure 2. Hemoglobin electrophoresis at pH 8.1, Amido Black Stain. The patient was run with a homozygous Hb-S and Hb-A+S (sickle cell trait) for comparison.

per cent), (b) frequent target cells, and (c) marked shift to the left (increased resistance) of red blood cells in the osmotic fragility test (Table 1).

HEMOLYTIC ANEMIA

Hb-S Thalassemia disease is known to be a severe or moderately severe type of congenital hemolytic anemia. The clinical and hematological pictures of this hemoglobinopathy are usually similar to those found in the intermediate type of Cooley's anemia; however, mild or asymptomatic cases have frequently been seen.[12] Thus as a result of a chronic hemolytic process, the formation of gallstones would be expected. The amount of bilirubin liberated by destroyed red blood cells cannot be correlated with the frequency of cholelithiasis as multiple factors come into play such as (a) presence or absence of biliary stasis, (b) amount of hepatic damage, (c) degree of hydration, (d) presence of infection and (e) congenital hemolytic diseases, i.e. hereditary spherocytosis or sickle cell disease. There is evidence of increased incidence of stone formation with increasing age.

The gallstones in this case were soft, black in color (Figure 3) and composed largely of bilirubin. Small amounts of calcium were present and accounted for the radiopaque appearance. Mintz *et al.*[5] have suggested that the presence of calcium tends to indicate that stones have been present for many months or years before a degree of cholelithiasis was added.



Figure 3. The gallbladder opened at the time of surgery. Numerous soft, black bilirubin stones were found of which approximately one half were photographed.

The clinical picture of gallbladder disease in children differs from that seen in adults. Usually childhood gallstones are asymptomatic or if pain is present, it does not localize well. One wonders how frequently the presence of abdominal crises are related to the presence of gallstones. Often an erroneous diagnosis of acute appendicitis is made (according to Ulin *et al.*,[1] 15 per cent). We were fortunate in the case under discussion to have characteristic right upper quadrant pain with radiation to the back and shoulder, combined with radiological and laboratory evidence of obstructive hepatic disease. According to the literature,[13] the radiation of gallbladder pain to back and shoulders in children is unusual.

PALPATION OF DUCT

Common duct exploration in children is usually not indicated but the duct should be palpated and an operative cholangiogram performed. In our patient, the common and hepatic ducts were of normal size. Two small radiolucent areas were seen in the right hepatic duct but it was felt in view of normal duct size that these would be passed into the duodenum. The dramatic drop in the direct bilirubin component some 12 hours post operatively with absence of bile in the urine, reflect on the successful removal of the obstructive component.

The use of blood transfusions has been recommended in sickle cell anemia and other allied heterozygous states to render the patient temporarily a "non-sickler." Many anesthesiologists refuse to accept patients if the hemoglobin is under 10 gm. per cent unless a supply of blood is available for transfusion purposes. However, it is advisable not to raise the hemoglobin level higher than the patient's normal range.[14] The danger is not imaginary; the giving of unnecessary blood to raise the hemoglobin to an abnormally high level, not only leads to an inhibition in the formation of the sickle cell but may promote a crisis.[15] Our patient underwent general surgery without transfusion with only a 250 cc. blood loss and a drop in hemoglobin from 9.7 gm. per cent to 8.1 gm. per cent. Adequate hydration and careful administration of oxygen was maintained. Prolonged or excessive oxygen inhalation is accompanied by erythroblastopenia with progressive breakdown in erythrocytes and subsequent anemia. ★★★

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PERIGEE PRICES

The astronaut, scheduled for blastoff into space, was receiving his final physical examination by his physician.

"How do you feel?" the doctor asked.

"Terrible," was the reply. "I'm worried."

"You shouldn't be worried," countered the doctor. "You are well trained, and besides, look what you're doing for your country and for posterity."

The astronaut shook his head: "The trouble is, doctor, that we have thousands of gadgets and systems in that spacecraft, and I keep remembering that every one of them was made by the lowest bidder."

Clinicopathological Conference LXXI

Conducted by the Department of Pathology
University of Mississippi School of Medicine
Jackson, Mississippi

Dr. James R. Jackson: "This case concerns a 58-year-old Negro female who was admitted to this hospital with a history of coma and seizures. We are told that she had been nervous for two or three years and on occasions had talked out of her head. For the past two months she had been bed ridden and apparently started with the first of many seizures, being described as jerking of the right side of the body. She was hospitalized in a local hospital for evaluation, and no specifics of this hospitalization are known.

"A month before her admission here she was described as having drawing of the right side of her body, tremors of the upper extremities, and continuous disorientation. The day before she was admitted she was said to have become completely unresponsive and apparently had a generalized seizure and continued to have generalized seizures intermittently during the 24 hours prior to admission here. At this time she was again seen by her local physician and noted to have a temperature of 103° and was given 100 mg. of Demerol and 2 cc. of penicillin-streptomycin and then referred here.

"There is perhaps some old history of chronic hypertension for which she had been taking red and white heart pills but apparently nothing in recent months. Here we have a 58-year-old woman who for two or three years has been confused. Certainly, this would suggest something going on in the frontal lobe or thereabouts. There is also a two months' history of a convulsive disorder which was initially focal in the left brain as manifested by peripheral Jacksonian seizures on the right and later with the generalized seizures would suggest a diffuse, spreading irritative lesion. There was no mention of headache or vomiting which would suggest a chronic progressive increase in intracranial pressure, but at this point, I think, one should be suspicious of an expanding neoplasm in the posterior frontal region.

"When she was seen here examination showed a temperature of 103°, pulse of 100, respirations 24 and blood pressure 100/60. As a rule, hypertension-bradycardia usually indicates a markedly increased intracranial pressure. This I don't think would be suggestive of marked increased pressure at this point. She was stated to have myoclonic activity of all extremities and the neck was quite stiff. Now the stiff neck may be related to meningeal irritation either from a chemical component of blood and/or high protein content in the spinal fluid or perhaps the cerebellar tonsils herniated down into the foramen magnum.

The patient in this month's CPC is a 58-year-old Negro female admitted with a history of coma and seizures. Discussers are Drs. James R. Jackson, William M. Flowers, Jr., and Carl G. Evers.

"She was described as being comatose but would respond to painful stimuli in all extremities. No papilledema was described and the pupils were said to be very small and unreactive. This may have been related to the Demerol that she received or it may be related to some brain stem signs. The eyes were described as being fixed and conjugately deviated to the left. This to me would indicate an irritative lesion in the posterior area 8 frontal on the right or perhaps a paralytic lesion on the left side so that the eyes were deviated to the opposite side.

"It was further stated that she had marked increase in muscular tone and was in a continuous state of spontaneous rhythmic myoclonic activity in all extremities. Sternal stimulation produced decerebrate rigidity with increased deep tendon reflexes throughout. Again this would point to a lesion at least as high as the midcollicular area

producing brain stem signs. At this point I think one would be suspicious of some brain stem difficulties from direct hemorrhage or secondary changes in the brain stem from supra-tentorial pressure with perhaps some coning of the tonsils in the foramen magnum.

DIAGNOSTIC FINDINGS

"Significant laboratory data on admission showed a hemoglobin of 15.6 and a BUN of 47, sodium 154, chloride 121. The urine specific gravity was 1.033 and there was a 2½ proteinuria. The microscopic examination of the urine was essentially negative. These findings I think would be compatible with the mild dehydration and the chronic illness.

"Skull films were obtained and these were reported as being normal. The lumbar puncture was carried out with the findings of xanthrochromic fluid with a protein of 1,766 mg. per cent. No cells were mentioned. Spinal fluid glucose was 99 with a concomitant blood glucose of 185 which is essentially within the range of normal and would tend to deter away from the diagnosis of meningitis. There was no mention of any pressure being taken.

"We are told that the next day the puncture was repeated and the opening pressure at this time was 300 mm. of spinal fluid. There were 14 cells, 11 polys, and 3 lymphs and 183 RBC's. It was not stated whether or not these red cells were fresh or crenated. With a bloody tap we usually have a ratio of about 500 to 1, and I think that this pleocytosis perhaps was related to the irritation of the high protein in the spinal fluid. On the second puncture the protein content was 980 mg. per cent and at this time was noted to clot in the tube as is the case with a high protein spinal fluid. Usually when it gets up to 600 or 700 mg. per cent it will clot.

RULING OUT KIDNEY DISEASE

"We are told that the stains for acid fast bacteria were negative and later on cultures were reported as negative for acid fast and fungi. Subsequently the BUN rose to 111. The creatinine was 44. This may have been related to a chronic debilitated state kidney disease or elevation from a central origin. But with the negative microscopic examination on urinalysis I would tend to believe that this was not related to a kidney disease.

"Five days after better hydration the hemoglobin came down to 10.8 and the BUN to 25 and the creatinine was normal. We are told that serum calcium and phosphorous and serum electrolytes were likewise within normal limits. She was admitted as a brain stem vascular accident, and the following day a bilateral carotid arteriogram was carried out."

"Dr. Flowers, could we see the chest films, skull films, and arteriograms?"

Dr. William M. Flowers, Jr.: "The chest film showed some uncoiling and a little tortuosity of the aorta and not much else. These findings were not thought to be significant or pertinent to the present case. The PA skull film appeared quite normal. The lateral film was also thought to be normal. However, the arteriogram showed what we believed to be a fairly well demarcated abnormal area. Following injection of opaque medium, the AP films showed a very definite increased density that might well be a stain, and a stain usually means a tumor. This is most obvious on the right side. A similar area was present on the left but not nearly as prominent. I did not see a stain on the lateral projections. When we first read the films, we suggested the possibility of tumor stain, and recommended a brain scan. I suppose that the patient was too sick for this procedure, but nevertheless, when all the indicated studies can be done together and read together, they enormously increase our diagnostic accuracy."

CEREBRAL INVOLVEMENT

Dr. Jackson: "I certainly agree there appears to be a stain on the AP projection up near the midline—particularly on the right side and to a lesser degree on the left. As noted, there is a shift of the right middle cerebral on the lateral view in an upward fashion. There is no late venous phase on the lateral projection which I think would probably have been of benefit. We could have seen the venous angle as formed by the thalamostriate vein and the internal cerebral vein or perhaps picked up a stain on the lateral projection.

"I think also that perhaps there is some suggestion of a mild hydrocephalus as evidenced by the wide sweep to the anterior cerebral as it comes around the corpus callosum. I didn't think that the pericallosal and the callosal marginal arteries on AP projection were separated but it may have been the phase of injection. At any rate she was given supportive care.

"Her temperature ranged between 103-105, and she was noted to have a decreased urine output and a fall in blood pressure down to 90/50. I am not sure in my own mind why this happened. She was started on neosynephrine drip and placed

in a hypothermia blanket. She continued with myoclonic jerks in all extremities and Dilantin 100 mg. and phenobarbital 100 mg. were started every 6 hours. These symptoms came under better control. The next 24 to 36 hours her condition gradually improved on this regimen.

"The third day she was noted to have Cheyne-Stokes respirations and on the fourth hospital day because of the possibility of a brain stem or posterior fossa tumor she was started on steroids. At this same time she was noted to be some better. She moved her head and carried out some simple commands but remained quite spastic in her extremities. On the sixth day she was said to have moved all extremities and on the eighth day she even attempted to speak.

PHYSICAL MANIFESTATIONS

"At this time her blood pressure fell to 70. The pulse was 64. She had a grasp reflex bilaterally with marked spontaneous clonus. She could move her eyes laterally to commands but no vertical or downward component of the eye movement was noted. She was also noted to have bilateral facial palsy. She could not open her mouth, was decerebrate, and did not seem to perceive pain below the neck line. She became less responsive, continued with increased spasticity and had a fall in blood pressure. There was a rapid rise in temperature despite the hypothermia blanket. This was the beginning of the end and she expired quietly on the tenth hospital day.

"Now how are we going to try to put all this together? Most CPC's are presented to show an unusual lesion or a lesion that was missed by the clinicians. I will go out on a limb and place this lesion in this particular patient in the body or the splenium of the corpus callosum with extension to the cerebral hemisphere and down to the basal ganglion. Statistically this should be a glioma of the corpus callosum—the first choice being a glioblastoma multiforme; followed by a lower grade astrocytoma, oligodendroglioma, ependymoma or lipoma. I doubt very much if this is a lipoma because they are usually calcified and have a rather distinctive x-ray picture. There is also a good possibility that this could be a falx meningoma arising from the same area with compression down into the corpus callosum.

"Reading of an abstract or chart does not convey as complete a clinical picture as when the patient is examined, but I couldn't help but wonder if a mercury scan or ventriculogram would not have delineated this lesion more clearly and perhaps some surgical intervention might have been of some benefit.

"Tonnis has shown that cerebral arteriography on occasion may not completely delineate a lesion in the area of the corpus callosum and it is quite frequently necessary to resort to ventriculography. Davidoff and Dyke back in 1936 established the pneumoencephalographic features of tumors of the corpus callosum which were: (1) separation and asymmetrical distortion of the lateral ventricles, (2) sharp defects in the lateral margins of both ventricles, (3) occasional failure of one lateral ventricle to fill with gas, (4) distortion of the sulci and convolutions of the medial aspects of the brain, and (5) deformity or obliteration of the dorsal and vostral part of the third ventricle.

"Alpers and Grant in 1931 considered that the diagnosis of tumor of the corpus callosum was possible clinically and postulated the syndrome that they thought was clear without being absolutely characteristic. In contrast Voris and Adson in 1935 reviewed 17 primary and 21 secondary tumors of the corpus callosum and concluded that symptoms and neurological findings were so complex and varied that accurate and clinical localization was impossible without pneumoencephalography. Brain states that tumors of the corpus callosum are not common yet he feels that they yield a distinctive clinical picture.

"Mental symptoms are prominent and are often the first symptoms noted. Apathy, drowsiness, defect in memory, and confusion are most prominent. Focal and generalized convulsions may occur because the situation of the tumor in the midline extending laterally into the central white matter on both sides leads to early damage of the pyramidal tracts. This is usually asymmetrical in the early stages and it is then common to find a hemiplegia on one side or seizures while the other side exhibits changes resulting from pyramidal tract lesions with loss of motor functions. Later a double hemiplegia may be found and tumors extending anteriorly may cause frontal lobe signs and, indeed, grasp reflex.

INTRACRANIAL PRESSURE

"Tremor and choreiform movements sometimes occur and are probably related to involvement of the basal ganglion. Signs of increased intracranial pressure are often late in developing and the protein content of the spinal fluid is usually quite high. This patient did have evidence of increased intracranial pressure. I think that with the seizure activity and the expanding intracranial lesion that intracranial pressure increased even higher and the lumbar punctures may have exaggerated already present brain stem signs.

"With hydration the brain probably became swollen but with the steroids along with the anticonvulsion medication controlling the seizures, then the brain became more lax, and she showed some transient signs of improvement. Despite this she continued to deteriorate exhibiting brain stem signs, decerebrate posturing, bilateral facial palsies, a paralysis of vertical movement of eyes—all signs of brain stem damage—and she expired quietly. Finally, my diagnosis would be a glioma of the corpus callosum with the possibility of a falx meningoma in this same area an outside chance."

Dr. Carl G. Evers: "Does anyone have any comments or questions? This case was presented as a CPC as a case for specific discussion. Contrary to popular opinion not all of our CPC cases are selected because of odd diagnoses and missed diagnoses. One of the criteria for a good CPC is the discusser's preparation for it. I think today certainly bears that out.

TYPE OF LESION

"The students were a bit reticent to localize this lesion. The majority opinion was intracranial neoplasm, with brain stem glioma the second choice. The pertinent findings are pretty much limited to the brain, and are as surmised by Dr. Jackson. The brain weighed 1,230 gm. which is within the normal range. Externally it was essentially unremarkable. There was very little evidence of edema or swelling. There was no cerebellar tonsillar coning or herniation, or evidence of herniation through the tentorium.

"Although she probably had, or undoubtedly had, increased intracranial pressure, this was not of a degree to produce herniation. There was a neoplasm which was arising in or involved the entire corpus callosum, extending downward to involve the fornices which were nearly completely obliterated in some areas. It extended laterally into the white matter on both sides, especially anteriorly, more extensively on the left side where there was an area of hemorrhage and necrosis in the white matter adjacent to the corpus callosum.

"Grossly it was difficult to define the borders of the tumor because of the characteristic diffuse infiltration. It involved the internal capsule on the left. The cortical grey matter of the supracallosal gyrus was also involved. The third ventricle was nearly obliterated by compression. The head of the caudate nucleus on the right was involved. The lateral ventricles were dilated due to obstruction of the third ventricle. The tumor did not extend downward into the brain stem. Sections from the cerebral peduncles, red nucleus, and substantia nigra were free of tumor.

"Microscopically, this was a glioma; more specifically, the proliferating tumor cells were astrocytes. Although there were no giant cell forms with numerous mitotic figures that one usually associates with a glioblastoma, there was a fair amount of pleomorphism. There were foci of necrosis with palisading of surviving cells around vessels, criteria for glioblastomas. There was also malignant vascular proliferation.

DESCRIPTION OF TUMOR

"A striking feature of the particular tumor in this case was the infiltration and widespread involvement of the leptomeninges or arachnoid. Foci of tumor bridging between the cortex and the arachnoid was present, and there was tumor involving the arachnoid around vessels deep within the brain. In other sections, the tumor was extending beneath the ependyma lining the ventricles. The most distal section, through the level of the inferior olive below the level of the fourth ventricle, showed no tumor within the brain substance, but the meninges anteriorly were involved.

"In summary, our diagnosis is a glioblastoma multiforme involving primarily the corpus callosum, but extending laterally on both sides into the adjacent white matter and downward to involve the fornices. Probably the bulk of the tumor, and more specifically the area of extensive necrosis, was on the left side. Whether this can be correlated with the vague right-sided findings I don't know. This particular lesion was so extensive that I doubt if surgical intervention would have accomplished anything other than a tissue diagnosis.

CARDIOVASCULAR CONSIDERATIONS

"If this patient did have hypertension, which there was no reason to suspect on this admission, clinically, it was not manifest by the usual cardiac hypertrophy or significant vascular disease. The heart was of normal size and there was really not much in the way of atherosclerosis for a patient this age. There was one other finding: the right lower lobe was infarcted as the result of the fairly recent embolus to the right lower lobe. It probably occurred within the last 24-48 hours, and I don't think there is anything in the clinical summary here that would allow us to pinpoint any particular time that this occurred."

Dr. Jackson: "Missing the diagnosis in this individual really did not mean too much. If you look over large series of cases of glioblastoma, and I

reviewed about 275, the mean survival of this group is four months, plus or minus two months. So if they are lucky they may go six months and if they are not so lucky they will go two and it's a good chance that going in there trying to get a biopsy in that area would have really stirred up a hornet's nest.

"Now what about the use of steroids in this type of tumor? I think it has a definite place because if you make a diagnosis of a glioblastoma, and it takes six weeks to get the cobalt in and they have two months to live then they have shot up six out of eight weeks of life expectancy. At the same time you are irradiating this area, this brain may be swelling and there is good evidence that Decadron or one of the steroids in gradually increasing dosage will keep the pressure down. I think that this is the case in this patient because she had no signs of uncal herniation or tonsillar cone.

"You can actually see these people when they get into the terminal stage of their disease, where they have been irradiated, have tremendous headaches and papilledema and you put them on about .7 mg. of Decadron twice a day—you may have to go up to 4 times a day on this. They will say they have a headache but it does not bother them much. They will eat and actually live a comfortable terminal existence. So this is something to keep in mind in the treatment of these type tumors.

"A scan would have 'lit up' this lesion, but I think this was actually present on arteriogram. Certainly if a ventriculogram were done, the ventricles would have been easy to hit posteriorly and they had shown the classical findings here of a lesion in this area. I think oftentimes we don't use air studies enough. A lot of times we operate just on the basis of a history and neurological findings and the scan. Occasionally we do an arteriogram to see how vascular it is.

"There are so few pneumoencephalograms done nowadays that a lot of time we forget the normal anatomy of the ventricular system. Arteriography was not perfected until after ventriculography so they would do a ventriculogram and make the diagnosis. The progress of neurosurgery in the treatment of tumors in the last 30 years has progressed very little: Of course there has been improvement of surgical skills and anesthesia. The brain scan has been of tremendous help but still a pneumoencephalogram, when done properly, is still a very good test." ★★★

2500 North State St.

MERRY CHRISTMAS

A fellow became an atheist but gave it up after a few years. The trouble? No holidays.

Radiologic Seminar XLIV: Congenital Hernia of the Diaphragm

Louis S. Chatham, M.D.
Yazoo City, Mississippi

Congenital diaphragmatic hernias are usually due to the persistence of one of the embryonic pleuroperitoneal canals. One of these is in the posterolateral segment of the diaphragm and is known as the foramen of Bochdalek. Herniation through this defect may occur on either side, but it is much less common on the right where it has been postulated that the liver affords some protection.

Hernias of this type may contain the stomach, small and large intestine, spleen, kidney, liver, and omentum. The diagnosis is usually suggested by the appearance on x-ray films of a pattern suggestive of gas filled loops of intestine in the chest. The mediastinal structures are frequently displaced toward the opposite side and the lung on the involved side is compressed. When contrast studies are performed, the displaced portions of the gastrointestinal tract are visible in the thorax.

Caffey[1] states that when a diaphragmatic hernia is suspected, the diagnosis should be established as soon as possible and surgical treatment instituted without delay. Sudden death may occur unexpectedly if the operation is postponed, and a delay in the surgical procedure makes more difficult the replacement of the herniated organs into the underdeveloped and small abdominal cavity.

Sponsored by the Mississippi Radiological Society.
From the Department of Radiology, King's Daughters Hospital.

In rare instances the liver only protrudes through a defect in the right side of the diaphragm resulting in a puzzling picture which may be confused with pulmonary consolidation or pleural fluid or exudate. A similar appearance is possible on the left side when only the spleen protrudes into the chest. Films made early in the first hours of life may be confusing because the herniated gastrointestinal lumens may not contain gas and the appearance may suggest a tumor rather than a diaphragmatic hernia. After several hours, however, sufficient gas has usually accumulated to warrant a diagnosis of diaphragmatic hernia.

Another congenital defect may occur in the anterior parasternal segment of the diaphragm, through the foramen of Morgagni, and here protrusions are made up largely of the colon and occasionally the stomach and small intestine. Often there is only a weakness of the anterior segment rather than an actual defect.

DIFFERENTIAL DIAGNOSIS

Eventration of the diaphragm is to be differentiated from a true hernia. Here there is a weakness or atrophy of variable amounts of the diaphragmatic muscle,[2] resulting in an unusually high position of the diaphragm. This usually occurs on the left side.

The infant whose films are shown in this report was brought to his doctor for treatment when the

parents noted a failure to thrive and persistent vomiting of feedings. The initial chest film (Figure 1) revealed a marked displacement of the heart and mediastinal structures toward the right side. The right hemidiaphragm was well delineated but the left could not be definitely seen. Peculiar gas shadows and soft tissue densities could be seen throughout the left hemithorax. The stomach bubble appeared to be normally situated. An examination of the intestinal tract using barium revealed most of the small bowel and colon in the left hemithorax (Figures 2 and 3). The stomach was in the usual position and revealed no significant abnormalities.

FINDINGS AT SURGERY

At surgery the esophagus was found to enter the abdomen normally through the esophageal hiatus and the stomach and duodenum were found below the diaphragm. The mesenteric small bowel and the colon down to the descending segment were found in the left thoracic cavity. After the intestine had been replaced in the abdominal cavity, an opening of the diaphragm in the left posterolateral aspect was found and repaired.

Films after surgery revealed no abnormality of the heart or mediastinal structures and the lung fields were clear. There was normal sharp delineation of the diaphragm on the postoperative examination. Below the diaphragm the intestinal gas markings were within normal limits. The child made an uneventful recovery.

SUMMARY

A congenital hernia through the foramen of Bochdalek in the left hemidiaphragm is described.

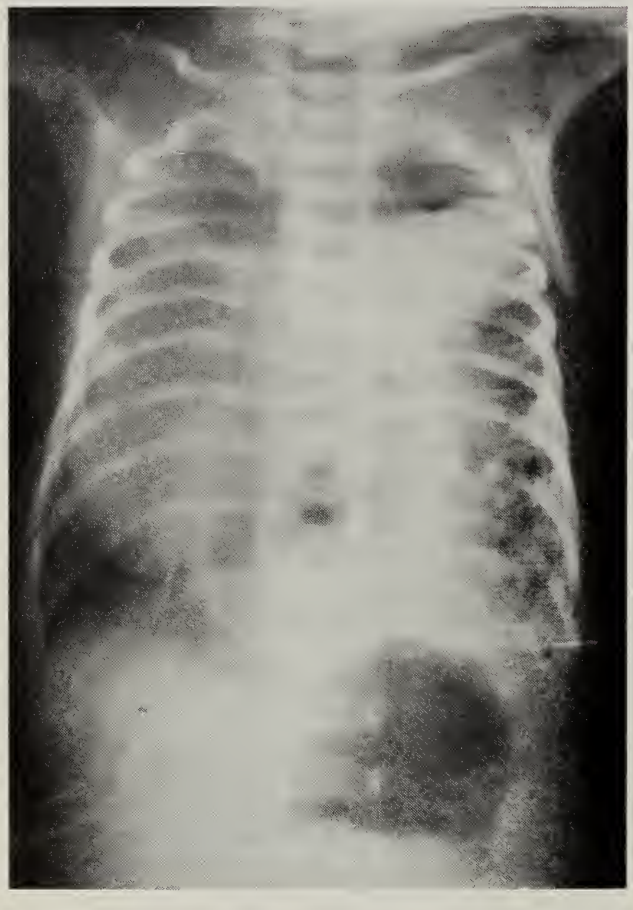




Figure 1, left, illustrates a chest film revealing the heart and mediastinal structures to be considerably displaced to the right, with multiple gas bubbles and areas of mottling noted throughout the left hemithorax. Note that the stomach gas bubble is in a normal position. Figure 2, right, is a delayed film following barium swallow, demonstrating barium filled loop of both small and large bowel in the left chest.



Figure 3. A lateral view, again demonstrating the herniation of much of the intestine into the left hemithorax. The stomach and duodenum, remaining within the abdomen, are partially filled with barium.

Congenital defects of the diaphragm may be large or small with absence of most of one of the diaphragmatic leaves. A larger defect such as in this case may be associated with herniation of a large portion of the abdominal viscera into the thorax. This is one of the causes of acute respiratory deficiencies of the newborn and is a surgical emergency. X-ray findings vary with the amount of herniation. If gas filled bowel is recognized in the thorax, the diagnosis can at times be made without difficulty. If necessary a barium enema or a barium meal may be given to identify the parts of the gastrointestinal tract within the hernia. The normal openings and areas of potential weakness of the diaphragm are as follows:

1. The foramen of Bochdalek, occurring in the posterolateral aspect of the diaphragm.
2. The foramen of Morgagni, parasternal in location.
3. The esophageal hiatus.
4. The aortic opening.
5. The opening for the inferior vena cava. ★★★

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PAX—WITH MINT JELLY

We are moving toward a world of peace, says philosopher Josh Billings, and there may come a time when the lion and the lamb will lie down together. But Billings says he's still betting on the lion.



The President Speaking

'Keep the Record Going'

EVERETT CRAWFORD, M.D.
Tylertown, Mississippi

HEALTH AND MEDICAL LEGISLATION may well vie for top spot on the agenda of the 1966 Regular Session of the Mississippi Legislature, and many apparently unrelated factors could contribute to such a circumstance. Almost everybody readily concedes that our state-sponsored health care programs for the indigent are fragmented and in many instances, as the 1964 study by the Board of Trustees demonstrated, are inconsistent with one another.

The new Title XIX in Public Law 89-97, Medicare, will require sweeping revisions in the laws of most states relating to care of the indigent. In effect, the new title says that a state must conduct a full range of category care programs, including old age assistance, the permanently and totally disabled, dependent children, and the blind, in addition to the medical assistance categories first initiated under Kerr-Mills—a state must conduct these by 1970 or lose its federal matching share.

Our association will sponsor three major measures, two of which passed the House but were lost in the Senate in 1964. The latter are the Battered Child law, now on the statute books in 45 states, and the liability shield for medical research, scientific studies, and investigations. The third is a mandate from our 97th Annual Session, seeking to establish in law that blood banking is a service and not a sale in the commercial and, hence, warranty sense.

The association has a proud history of sponsoring good health legislation in the interest of all Mississippians. Let's keep the record going in the new legislative year. ★★★

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EDITORIALS

The Facts of Doctor Draft: A Discriminatory But Necessary Law

I

THE UNIQUE LIABILITY of the three scientific health professions for military service has been underscored by the January Doctor Draft call for 2,000 physicians, dentists, and veterinarians. Three out of four—some 1,529 to be exact—will be physicians with the remainder of the calls spread among 350 dentists and 100 veterinarians. Generally, there are many unanswered questions about the rejuvenated Doctor Draft, the substantial increase in the callup required by the war in Viet Nam, and the complex law itself. It's time to clear the air and sift fact from gossip.

Because Doctor Draft affects very few physicians, really a fraction of 1 per cent in those actually conscripted, there may be a tendency on the part of many to forget momentarily both the mechanics and impact of the law. To begin with, it is discriminatory, but it is also a necessity of national security. Before and after Doctor Draft, the American medical profession has fully and realistically recognized its obligations to the nation's fighting forces. The history of American military medicine is not only a proud one but also a narrative of competence and excellence as well.

On the other hand, medical organization has adhered to a no-nonsense policy and has spoken out against inflation of the military medical establishment beyond legitimate need consistent with overall national security. For example, when medical care for dependents of those serving in the uniformed forces was being debated, American medicine frankly said that such care, if and when authorized by the Congress, ought to be rendered primarily in private, nongovernmental facilities by private practitioners and not in military hospitals by medical officers. The result was the Dependents' Medical Care Act of 1956, the original Medicare, and not a tripling of the service medical corps.

II

During January through April 1966, induction will be ordered for the current quota limited to ages 26 up to 35. In general, they will be physicians who have finished internships two to five years ago, and some will be called from private practice. Of the total, 949 will be assigned to the Army, 266 to the Navy, and 314 to the Air Force. All drafted will be given an opportunity to accept commissions in the grade of captain for the Army or Air Force or lieutenant for the Navy prior to induction. Should any refuse, they will still be inducted and can be required to serve in their professional capacities in an enlisted grade. As a

neophyte medical officer, the physician will receive about $800 per month in base pay, quarters and subsistence allowances (neither of which is taxable), and special incentive pay.

Berry Plan residents in training will not be subject to the January call. They are physicians who have applied for and been accepted in the Armed Forces Appointment and Residency Consideration Program. Under this plan, the young doctor who is liable for military service volunteers for a reserve commission and is brought to active duty at a time mutually acceptable to himself and the military service. To assure a supply of specialists, the Department of Defense annually sponsors a deferment for a selected number of Berry Plan participants who will be permitted to complete their residency training before being called to active duty.

Marriage and fatherhood are not acceptable bases for deferment unless it can be demonstrated that undue hardship will result from the doctor's induction. Nor are the same physical fitness standards applied to physician-inductees as are required of reserve commission applicants. A draft liable physician is physically acceptable for military service if he can reasonably be expected to be productive as a physician in the armed forces. Generally, those with static impairment and those with chronic progressive or recurrent diseases, if asymptomatic or relatively so, will be found physically qualified. Inductees will be over age 26, and draft liability ceases on the 35th birthday.

III

Doctor Draft as we know it today first showed up in the 80th Congress. AMA and most state medical associations opposed the original bill, and it was defeated. In the next Congress, a modified version was introduced and supported by AMA. The bill was subsequently enacted into Public Law 81-779 on September 9, 1950, to provide physicians, dentists, and veterinarians to meet the needs of the Korean War.

American medicine recognized that the need for military medical officers could be met then in only one of two ways: By recalling reserve officers who had seen service during World War II or by agreeing to legislation providing for the orderly callup of physicians who had been deferred during the war or who, under Navy V-12 or ASTP, had received assistance in continuing or completing their medical education and who had been unconditionally discharged in 1946. The choice was obvious.

Doctor Draft was extended by the Congress at two year intervals until 1957 when a new enactment, Public Law 85-62, was put on the books. It changed the 1950 law in two important ways: First, only those physicians, dentists, and veterinarians who are otherwise liable for military service as regular registrants are subject to induction and second, the Congress gave the President express authority to call any medical, dental, or veterinary member of a reserve component to active duty for 24 months if he had not previously served at least a year and had not, at the time of the call, attained his 35th birthday. The law was extended in 1959 and the special incentive pay was made applicable to physicians. In 1963, the law was again extended until 1967 and the incentive pay was increased.

IV

Under Doctor Draft, heavier calls for physicians have been issued since January 1964 when 1,000 physicians were inducted. Last January, the quota was 852, a total which will be almost doubled next January because of the Viet Nam buildup. The Selective Service contends that it makes the fairest possible rules and opens every reasonable avenue for remedy and appeal.

For example, the distribution of any draft call upon the several states is based strictly upon a given state's percentage of all physicians nationally



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"He looks like that man in the almanac."

who have been classified as available for induction. Say that one state's draft liable 26-35 age group of doctors made up 5 per cent of all such available physicians in the United States. In any callup, 5 per cent of the quota would be assigned to that state.

A draft liable physician may appeal his classification of 1-A within 10 days of the mailing of the classification notice. If he is in practice, he may appeal an order for induction based upon his being essential and the unavailability of a replacement. He may even request a delay in induction.

The harsh realities of armed confrontations magnify the sometimes obscure fact that the cold war is about the hottest thing going in the mid-20th century. Nobody wants to be picked on for military service, and many resent the discriminatory character of Doctor Draft, however fairly and impartially constructed in the face of national security needs. What is important now, as it has been since 1776, is that American physicians understand and appreciate national need just as surely as they do the medical need of their patients.—R.B.K.

The Dilemma of Sukarno, Cinchona, and Quinine

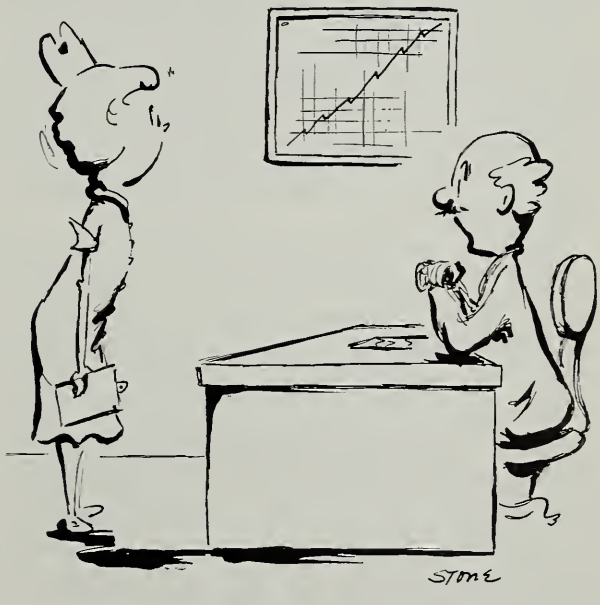
A girl-happy, left-leaning dictator in southeast Asia and chaotic political instability in central Africa are increasing the cost of medical care in the United States. Sukarno's antics and the mess in the Congo, unfortunately magnified by mutating malarial organisms, have led to a shortage of quinine raw materials and a six-fold increase in the price of quinine and quinidine at the corner drug store.

Every physician knows that quinine is an alkaloid extracted from the bark of the rare cinchona tree which is cultivated in Indonesia and the Congo where most of the world's supply is produced. Although cinchona bark prices have been inching up since 1949, the situation since 1958 when Indonesia and the Congo began to fall apart at the political seams has become acute.

Compounding the problem to no small extent was the dwindling of scientific interest in quinine after World War II when the synthetic quinine substitutes came into favor. More recently, the experts say, there is evidence that malaria strains are developing resistance to the synthetics, while studies indicate that malaria plasmodia do not, in fact, become resistant to quinine. So interest in natural quinine supplies has logically been renewed.

In the meanwhile, there was little incentive to plant and cultivate the finicky cinchona, and existing groves in Indonesia and Africa deteriorated. Although the tree grows wild in some parts of South America, this source is unpredictable, because it yields only about a third the quinine which is obtained from the cultivated trees with resulting higher processing costs. And as with almost any scarce item, cinchona bark is turning up on the black market. Far East smugglers are offering it for sale in Hong Kong and Singapore. Too, there is a shortage of processors. Most bark-to-quinine conversion is done by the Dutch and West Germans. There is a single processor in Great Britain, and none in the United States.

Quinidine can be obtained in small amounts from cinchona bark, but it is primarily made by converting quinine, a costly and laborious process. If it were to become necessary to step up quinidine production, supplies of increasingly precious quinine could be rapidly reduced to a dangerous low. The American pharmaceutical industry is facing not only a problem but also a dilemma. Such respected old line organizations as Eli Lilly are deeply concerned and are taking unusual measures to assure a continuing flow of the drugs into normal channels of ethical distribution.



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"Oh, it has nothing to do with medicine, but it impresses patients."

Any possible solution short of restoring normal supply of cinchona bark at reasonable prices seems to lie in three areas: The ability of the American pharmaceutical industry to develop new quinine and quanidine substitutes, success in developing low cost synthetic processing, or finding a new source, possibly in this hemisphere, of new cultivated cinchona groves. A real challenge? Of course it is, but American drug makers have quite a reputation for achieving success in the face of near-impossible circumstances.—R.B.K.

Skate Boarding: A Downright Risky Fad

Skate boarding, successor craze to the hula hoop, isn't contributing to a reduction of childhood accidents, and the American Medical Association labels the fad as "downright risky." AMA studies show that fractures of extremities caused by skate board spills are commonplace, and minor injuries can't even be counted. A few deaths have been reported in skate board accidents.

In cautioning the public of hazards to youngsters who zip about on the two-foot long, skate-wheeled gadgets, AMA wisely concedes that society can't ban every activity which is likely to result in injury or even death. Bicycling is also dangerous, and so is skiing. But some few U. S. cities take a different view and have made skate boarding illegal. Yet, one major TV network is covering skate board tournaments, and it appears that the sport is more likely to gain devotees than to prove a passing fad.

Physicians will be among the first to agree that a set of precautions laid down by the National Safety Council on skate boarding make real sense. NSC says to keep the whizzing youngsters off city streets and driveways that incline into streets. Children should confine skate boarding to playground areas and uncongested sidewalks and be encouraged to develop skill and safety awareness. Boards ought to be in good working order and not left around for some unsuspecting soul to trip over. Parents ought to be sure that children understand and apply these simple precautions.

In the meanwhile, happy and safe sidewalk surfing.—R.B.K.

PERSONALS

ALBERT C. BRYAN, SR., of Meridian was honored by the University of Tennessee School of Medicine at fall commencement exercises with the award of the "Golden T," a special scroll given to 50 year graduates. Dr. Bryan is an Emeritus member of the association.

WALTER W. CRAWFORD of Tylertown has been named chairman of the new city planning commission which will study zoning needs, construction standards, and long range municipal planning for development and growth of the city.

VICTOR D. FRANKS of Marks, a 1915 graduate of the University of Tennessee School of Medicine, received his "Golden T" scroll in ceremonies recently at Memphis. Additional local honors were conferred upon Dr. Franks when the Marks Methodist Church named him an honorary steward and his American Legion post elected him to life membership.

H. LAMAR GILLESPIE of Hattiesburg was among 12 alumni honored by the University of Southern Mississippi during recent homecoming ceremonies with the award of a distinguished service certificate for outstanding achievement during the past year.

MARTIN B. HARTHCOCK has announced the opening of his offices at 440 E. Woodrow Wilson Drive, Jackson, where his practice will be limited to plastic and reconstructive surgery.

G. SWINK HICKS of Natchez has been elected chief of staff at the Jefferson Davis Memorial Hospital. He is a past president and current member of the Board of Trustees of the association. Other staff officers are DONALD E. KILLELEA who was named vice chief of staff and HERBERT H. HICKS, secretary.

JOHN B. LEVENS, JR., of Bay St. Louis has been elected chief of the medical staff of the Hancock General Hospital. He succeeds W. L. MCFARLAND. Other staff officers are MARION J. WOLFE, SR., vice chief, and CHARLES J. COX, secretary.

MILTON T. PERSON, JR., was named chief of staff of the Greenwood Leflore Hospital for the coming year. Serving with him are JOHN M. ALFORD, JR., vice chief of staff, and RAYMOND W. BROWNING, secretary.

WAYMOND L. RONE of Jackson has been designated chief of radiology at the new Hinds General Hospital. ROLAND F. SAMSON and GEORGE M. STURGIS have received appointments to the hospital's department of pathology.

ROBERT E. TYSON of Jackson has announced the opening of his office at 514-E E. Woodrow Wilson Drive for practice limited to internal medicine.

WILLIAM B. WIENER of Jackson is serving as area chairman for the $24 million Tulane Forward Fund campaign. He is a 1940 graduate of the New Orleans medical school.

DEATHS

BURNSTEIN, NORMAN, Jackson. M.D., Louisiana State University School of Medicine, New Orleans, 1943; interned Touro Infirmary, New Orleans, La.; fellowship in internal medicine, Louisiana State University School of Medicine, New Orleans; member, Southern Medical Association, American College of Physicians, American Diabetes Association, American Rheumatism Association, American Society of Internal Medicine, The Endocrine Society, and the American Heart Association; certified by the American Board of Internal Medicine, 1950; captain, U. S. Army; died Oct. 18, 1965, aged 46.

FOWLER, ROBERT LEE, Marion. M.D., Louisville Medical College, Ky., 1906; Emeritus member of MSMA; died Oct. 10, 1965, aged 94.

HARPER, BYRON BEETHOVEN, Itta Bena. M.D., Vanderbilt University School of Medicine, Nashville, Tenn., 1908; Emeritus member of MSMA and member of the Fifty Year Club; died Sept. 29, 1965, aged 80.

WALKER, BENJAMIN NEWTON, JR., Jackson. M.D., University of Virginia School of Medicine, Charlottesville, 1944; interned Touro Infirmary, New Orleans, La.; residency, St. Joseph's Hospital, Memphis, Tenn., one year; member, Southern Medical Association and the American Academy of General Practice; captain, U. S. Army; died Oct. 18, 1965, aged 46.

State Morbidity Reported Through October 22

The Mississippi State Board of Health reports the following occurrence of morbidity for 1965 through the 43rd week of the year, ending Oct. 22, 1965. Case totals reported are shown opposite the disease condition.

Tuberculosis, pul.	1,055
Tuberculosis, O.F.	36
Typhoid fever	7
Encephalitis, infectious	16
Toxoplasmosis	1
Septicemia, Staph.	9
Dysentery	
Bacillary	50
Amoebic	1
Dysentery, NOS	9
Leptospirosis	1
Meningococcal infections	28
Diphtheria	1
Mononucleosis, infectious	44
Hepatitis, infectious	235
Hepatitis, serum	1
Tetanus	3
Helminthic infections	
Hookworm	957
Ascariasis	328
Strongyloides	56
Meningitis, O.F.	37
Histoplasmosis	11
Other Cestode Infestations	6
Salmonella Inf.	29
Gastro-enteritis	2
Streptococcus infections	
Scarlet fever	43
Strep throat	1,941
Pertussis	13
Measles	1,444
Chickenpox	258
Mumps	360
Vaccinia, smallpox	1
Influenza	5,891
Gonorrhea	3,727
Syphilis	
Early	614
Late	122
Rabies in animals	
Bats	41

NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

ABIDE, JOHN KALIL, Cleveland. Born Greenwood, Miss., Dec. 7, 1936; M.D., Tulane University School of Medicine, New Orleans, La., 1961; interned Charity Hospital of Louisiana, New Orleans, one year; ob-gyn residency, Charity Hospital of Louisiana, New Orleans, three years; elected Oct. 13, 1965, by Delta Medical Society.

CRICK, GENE ELLIS, Minter City. Born Sweatman, Miss., Dec. 6, 1932; M.D., University of Mississippi School of Medicine, Jackson, 1964; interned Mississippi Baptist Hospital, Jackson, one year; elected Oct. 13, 1965, by Delta Medical Society.

DAVIS, JAMES BUCHANAN, Pascagoula. Born Poplarville, Miss., Oct. 22, 1932; M.D., University of Mississippi School of Medicine, Jackson, 1961; interned Mobile General Hospital, Ala., one year; surgery residency, Mobile General Hospital, Ala., three years; elected Sept. 8, 1965, by Coast Counties Medical Society.

DODSON, MARION LUTHER, Waveland. Born Harperville, Miss., March 9, 1936; M.D., Tulane University School of Medicine, New Orleans, La., 1961; interned Mississippi Baptist Hospital, Jackson, one year; general practice residency, Huey P. Long Charity Hospital, Pineville, La., one year; elected Sept. 8, 1965, by Coast Counties Medical Society.

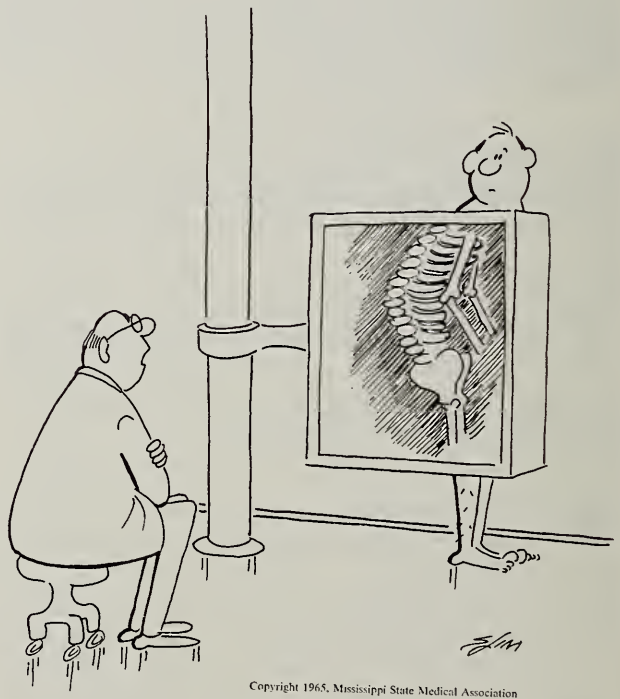
HILBUN, WILLIAM MARVIN, JR., Amory. Born Centreville, Miss., Nov. 3, 1935; M.D., University of Mississippi School of Medicine, Jackson, 1960; interned University of Mississippi School of Medicine, Jackson, one year; pediatric residency, University of Mississippi School of Medicine, Jackson, two years; captain, U. S. Air Force; elected Sept. 16, 1965, by Northeast Mississippi Medical Society.

HODGES, JEFF ALLEN, Pascagoula. Born Ripley, Miss., June 30, 1932; M.D., University of Mississippi School of Medicine, Jackson, 1958; interned Lackland Air Force Base Hospital, San Antonio, Texas, one year; elected Sept. 8, 1965, by Coast Counties Medical Society.

MEADORS, MARVIN PORTER, JR., Cleveland. Born Memphis, Tenn., Aug. 18, 1933; M.D., Tulane University School of Medicine, New Orleans, La., 1959; interned Touro Infirmary, New Orleans, La., one year; ENT and Internal Medicine residency, Charity Hospital of Louisiana, New Orleans; general practice residency, Touro Infirmary, New Orleans, La., one year; elected Oct. 13, 1965, by Delta Medical Society.

PIERCE, PATRICK LOUIS, Gulfport. Born Fayetteville, Ark., Aug. 14, 1935; M.D., University of Tenn. College of Medicine, Memphis, 1958; interned Gorgas Memorial Hospital, Canal Zone, one year; ophthalmology residency, Tulane University School of Medicine, New Orleans, La., three years; captain, U. S. Air Force, two years; member, Southern Medical Association; elected Sept. 8, 1965, by Coast Counties Medical Society.

WHIGHAM, CLARENCE DONALD, Pascagoula. Born Opp, Ala., March 10, 1932; M.D., Medical College of Alabama, Birmingham, 1958; interned Mobile General Hospital, Ala., one year; general surgery residency, Mobile General Hospital, Ala., six years; captain, U. S. Air Force, two years; elected Sept. 8, 1965, by Coast Counties Medical Society.



"And how long have you been driving a sports car?"

Book Reviews

The Management of Fractures and Soft Tissue Injuries, 2nd Edition. By The Committee on Trauma, American College of Surgeons. 365 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $7.50.

This excellent book is a combination of the two previous publications entitled *An Outline of the Treatment of Fractures* and *Early Care of Acute Soft Tissue Injuries*. Both sections have been revised and updated by many members of the American College of Surgeons. The purpose, of providing a useful outline for the initial management of the injured, is well served in this concise and well-written book.

The first 10 chapters are excellent and should be read by all doctors who are even occasionally called upon to treat accident victims. The chapters dealing with primary assessment of the injured, care of the patient with multiple injuries, tetanus, and shock are particularly well written and up-to-date. However, the section on "Treatment of Specific Fractures" leaves something to be desired.

Approximately 60 pages are devoted to the treatment of specific fractures and naturally, only a few guidelines can be given in this short space. The casual or inexperienced reader might get the impression that a certain fracture is immobilized in plaster for six weeks, after which the immobilization is discontinued.

This, of course, is not the case, and I believe more emphasis should be put on the importance of determining union or lack of union of a fracture by clinical testing and by x-rays, rather than by a time table. The physician or surgeon who relies on a time table alone to determine when immobilization of a fracture may be discontinued will find himself and his patient in trouble—and possibly in court.

There are several minor corrections that should be made in the section dealing with epiphysial injuries. For example, on pages 120 and 121, in discussing epiphysial separations at the elbow, the proper treatment is discussed for children and adults. Adults do not get epiphysial separations, since their epiphyses are closed.

The sections dealing with facial injuries, head injuries, spine and spinal cord injuries, at times seem to miss the objective of this book. There is too much detail as to definitive treatment, and this seems to detract from the objective of furnishing information for emergency treatment. Most serious wounds of these types are going to be referred to the proper specialist, whether orthopaedist, neurosurgeon, or plastic surgeon. The book is certainly not a treatist to be referred to by a surgeon experienced in these particular injuries and there is too much unnecessary material for the physician giving emergency or initial treatment.

The section on eye injuries seems to hit the happy medium of describing the emergency or initial treatment without going into too much detail as to the definitive treatment.

In general, this is an excellent book, however, and will be of extreme value, especially to medical students, interns, and residents. The book has been kept small so that it will fit in the pocket of the house officer's white coat. It is an interesting book and will definitely be of value also for a generalist, general surgeon, or other doctor seeing the patient initially. A copy of this book should be kept in every hospital emergency room and library for quick reference.

J. Elmer Nix, M.D.

Clinical Neurology. By Frank A. Elliott, M.D. 698 pages with illustrations. Philadelphia: W. B. Saunders Company, 1964. $12.50.

Dr. Elliott is an English neurologist transplanted to Philadelphia. He brings the best of the English school of clinical neurology to this textbook. Although he states in the introduction that it is written for students and residents it has something to offer those in practice in other fields of medicine also.

This book is certainly a fresh breeze in the doldrums of neurologic textbooks. His writing is lucid and concise. His opinions are given in a straightforward manner and the treatment for any condition is given clearly and briefly. If there is no treatment that he considers worthwhile, he says so.

One of the great advantages of the book is that it is up-to-date, amazingly so for a textbook, including some references in the year of its publication 1964. It is written from the large background of the author's personal experience in the practice of clinical neurology.

It does not include a section on the neurologic examination but does have pertinent chapters on neurologic symptoms and signs and their meaning in terms of the type and location of neurologic disease. There are some mistakes and omissions in the book which might be expected in any new textbook.

This book is to be highly recommended to anyone who is about to purchase a neurologic text. The freshness of its approach and its currency are its chief recommendations which should be of extra value to anyone who feels that he has gotten behind in the field of clinical neurology.

ROBERT D. CURRIER, M.D.

Physical Examination of the Joints. By William P. Beetham, Jr., M.D.; Howard F. Polley, M.D.; Charles H. Slocumb, M.D.; and Walt F. Weaver, M.D. With 15 Anatomic Drawings by Russell L. Drake. 198 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $7.50.

This publication is the work of doctors from the Mayo Graduate School of Medicine, University of Minnesota. Its purpose, as mentioned in the preface, is "intended for physicians and students who wish an elementary, comprehensive guide for conducting the physical examination of joints, and for evaluating involvement of the joints in various rheumatic diseases."

The book is divided into chapters consisting of an introduction to examination of joints, as well as one chapter on each of 11 different joint areas of the body. These chapters cover the examination of the specific joint, but do not go into the conclusive diagnostic features of any one illness, merely pointing out that certain findings are abnormal, and guiding the physician in making the correct diagnosis. Each chapter is followed by a bibliography for those more interested in further information about that area.

The material is presented in each chapter simply and efficiently, noting the general technical procedure of examining each joint, advising what general things should be observed, and the ranges of normal motion. With the aid of numerous photographs and line drawings, this book is an excellent treatise on the normal joint as well as a guide to joint abnormalities. Certain special abnormal conditions in each joint are covered with indications of their abnormal features, especially in the line of injuries. Disease processes in general are not covered, only referred to in explaining certain abnormalities. Although this book would have very little value for the graduate orthopaedist, students and other physicians will find it very helpful in improving their overall diagnostic technique.

J. R. BANE, M.D.

Books Recieved

The JOURNAL has received the following books for review. Selections will be made for more extensive reviews in the interest of readers as space permits. Further information on books listed will be furnished on request. Physicians are encouraged to submit reviews of additional books which, in their opinion, merit comment.

New Drugs: 1965 Edition. By the AMA Council on Drugs. 510 pages. Chicago: American Medical Association, 1965. $5.50.

Textbook of Otolaryngology. By David D. DeWeese, M.D., and William H. Saunders, M.D. 511 pages with illustrations. St. Louis: C. V. Mosby Company, 1964. $9.25.

From Auscultation to Phonocardiography. By Aldo A. Luisda, M.D. 351 pages with 196 illustrations. St. Louis: C. V. Mosby Company, 1965. $17.75.

Rypin's Medical Licensure Examinations. Edited by Arthur W. Wright, M.D. ed. 10. 840 pages. Philadelphia: J. B. Lippincott Company, 1965. $12.50.

Management of the Patient With Cancer. Edited by Thomas F. Nealon, M.D. with contributions by 71 authorities. 1,067 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $27.50.

Principles of Chest Roentgenology, A Programmed Text. By Benjamin Felson, M.D., Aaron S. Weinstein, M.D., and Harold B. Spitz, M.D. 221 pages with illustrations. Philadelphia: W. B. Saunders Company, 1965. $6.00.

Bone Tumors. By Louis Lichtenstein, M.D. ed. 3. 411 pages with illustrations. St. Louis: C. V. Mosby Company, 1965. $16.75.

New FDA Controls Over Stimulant and Depressant Drugs To Be Effective Feb. 1

New and tighter controls over the amphetamines, barbiturates, and other psychotoxic drugs with a potential for abuse will become effective Feb. 1, 1966. The Food and Drug Administration, under newly imparted broad powers, will enforce the measure which is formally titled the Drug Abuse Control Amendments of 1965.

C. A. Armstrong of New Orleans, FDA district director, said in a statement to the association that "the amendments provide for stronger regulation of the manufacture, distribution, delivery, and possession of depressant and stimulant drugs." The new law does not extend to control of narcotics which remain under the supervisory jurisdiction of the U. S. Bureau of Narcotics under the Harrison Act.

In addition to controls on manufacture and distribution of this classification of drugs, the amendments give FDA new and stronger enforcement powers with which to fight drug counterfeiters.

Both manufacturers and wholesalers of stimulant and depressant drugs are required to register with FDA. Although manufacturers are now required to register under the 1962 amendments to drug laws, the new statute calls for supplemental registration where a pharmaceutical manufacturer is engaged in making amphetamines and barbiturates.

The new law will also affect pharmacists and physicians who actually dispense the drugs in question. An initial inventory must be made as of the effective date, Feb. 1, the records of invoices and prescriptions maintained thereafter. All such records will be subject to FDA audit and inspection, and they must be kept for three years.

Physicians generally are affected by the new amendments only to the extent of prescribing the drugs in question. No prescription may be renewed more than five times and may remain effective for only six months. Thus, after five renewals or six months, which ever comes sooner, the prescription is no longer valid. There are, of course, no limitations on physicians' issuing prescriptions as are deemed necessary in the care of patients.

The amendments specifically prohibit:

—Manufacturing, processing, or compounding of the designated drugs except by registered pharmaceutical manufacturers.

—Distributing the drugs to any persons who are not licensed or authorized by federal or state law to receive them.

—Possessing stimulant or depressant drugs except as authorized under the law.

—Refilling prescriptions for these drugs more than five times or subsequent to six months after the date of the issue of the prescription.

—Failing to maintain appropriate records as required by law when engaged in the making or distributing of the drugs.

—Making, selling, possessing, or concealing any counterfeit drug, equipment for making such drugs, or doing any act causing the sale of such counterfeit drugs.

Armstrong said that FDA estimates that 9 billion amphethamine and barbiturate tablets and capsules are manufactured annually in the United States and that about half or 4.5 billion are diverted out of medical channels and sold illegally.

FDA records show how organized rings of drug bootleggers purchase amphetamines at $1 per thousand tablets, resell them at $50 for eventual illegal retail on the goofball market at 25 cents each. Counterfeit drugs are considered highly dangerous both by the profession and FDA, and while counterfeiting is a much smaller problem than bootlegging, it warrants the same enforcement measures, the authorities said.

ORGANIZATION / Continued

State Journal Parley Is Held at Chicago

Editors, publications committee chairmen, and state medical association executives met at Chicago Oct. 23-24 for the biennial State Medical Journal Conference. The meet was sponsored by the 32-state combine of associations which operate the State Medical Journal Advertising Bureau, the national advertising sales representative for the medical publications.



State medical journal conference participants are, from the left, Dr. Thad Moseley of Florida, conference chairman; Dr. Donovan F. Ward, principal speaker; and Dr. Lawrence W. Long, JMSMA representative. Dr. Moseley, Florida Journal editor, is a native Mississippian.

Dr. Thad Moseley of Jacksonville, Fla., editor of the *Florida Medical Journal,* was conference chairman. The two day program featured papers and panel presentations on editorial, advertising, and production aspects of state association journals. Featured speakers included Dr. Donovan F. Ward of Dubuque, Iowa, immediate past president of the American Medical Association, leading executives of the American pharmaceutical industry, state journal editors, publications committee chairmen, and state medical association executives who serve as managing editors and business managers of the publications.

JOURNAL MSMA was represented by Dr. Lawrence W. Long of Jackson, chairman of the Committee on Publications. He said that the conference "began and ended on an encouraging note with evidence that both the quality of the state journals and the advertising prospects have improved." Accompanying Dr. Long were Rowland B. Kennedy of Jackson, JOURNAL managing editor, and Ovid H. Bell of Fulton, Mo., president of The Ovid Bell Press, Inc., printers of the JOURNAL.

AMA Issues Model Emergency Room Contract

A sample agreement for the operation of a hospital emergency department by a partnership of physicians on the medical staff has been prepared by the American Medical Association.

Developed by AMA's Law Department in cooperation with the Department of Hospitals and Medical Facilities, the sample contract was prepared in response to numerous requests for assistance from hospital medical staffs that have found it difficult to provide staffing through voluntary arrangements.

The sample agreement calls for the partnership to provide the services of a duly licensed physician in the emergency department on a continuous, uninterrupted basis, 24 hours each day, seven days each week.

Responsibilities of the hospital to provide adequate space, equipment and supplies, maintenance, and nursing and other non-physician services are set forth.

Members of the partnership and its physician-employees would be prohibited from maintaining a private office within a specified radius of the hospital or from treating patients outside the hospital within this radius except in cases of emergency.

Services rendered by the partnership would be limited to emergency treatment. Follow-up care would have to be referred to the patient's personal physician or, where the patient had no personal doctor, to members of the attending staff on a rotation basis.

Procedures are established for the collection and remission of all physicians' fees in a manner consonant with generally accepted ethical principles.

Other matters treated in the sample agreement include: professional courtesy, medical records, ethics and standards, policies and procedures, and liability insurance.

Copies of the sample agreement are available from the Department of Hospitals and Medical Facilities, American Medical Association, 535 North Dearborn St., Chicago, Ill. 60610.

1966 Robins Award Competition Is Announced

The Fifth Annual MSMA-Robins Award for outstanding community service by a Mississippi physician has been announced by the Board of Trustees to the component medical societies of the association. Each society has been invited to submit a nomination for the honor, according to a statement by Dr. Everett Crawford, president, and Dr. John B. Howell, Jr., Board chairman.

Nominees must be members of the association, and the community services recognized should be apart from purely professional attainment. Generally, the service should have benefitted the local or state community in a civic, cultural, or general economic sense. The service need not, however, have been a single achievement, since many outstanding citizens contribute to community betterment in many ways through a series of services.



Robins Award

Nominations should be made by letter, and there are no restrictions as to length or attached exhibits which assist in establishing the nominee's qualifications. All nominations must be signed by an officer of the sponsoring component medical society.

Deadline for submission of nominations, Drs. Crawford and Howell said, is Jan. 31, 1966. Each nomination will be acknowledged, and the Board of Judges will review the nominations in February.

Previous winners of the top honor are Dr. Thomas G. Ross of Jackson, nominated by the Central Medical Society in 1962; Dr. Frank M. Davis of Corinth, by the Northeast Mississippi Medical Society in 1963; Dr. Howard A. Nelson of Greenwood, by the Delta Medical Society in 1964; and Dr. Maura J. Mitchell of Ellisville, by the South Mississippi Medical Society in 1965.

The award is a sculptured plaque in *bas* relief, engraved and mounted on a mahogany panel. It is sponsored by the A. H. Robins Company of Richmond, Va., long-established manufacturer of ethical pharmaceuticals, and the state medical association.

Dr. Nelson Is Elected Ole Miss Alumni Veep

For the first time in the history of the University of Mississippi, a physician will assume the presidency of the Ole Miss Alumni Association next year. At recent homecoming activities, Dr. Howard A. Nelson of Greenwood was named vice president of the association for 1965-66. He will serve as president in 1966-67.

Other current Ole Miss alumni officials are R. D. Wilcox of Laurel, president; James N. Butler of Oxford, secretary; Sam P. Carter of Quitman, athletic representative; William S. Griffin of Oxford, director of alumni activities; and C. William Price of Jackson, medical alumni secretary.

Dr. Nelson is a past president and past trustee of the state medical association. He now serves as speaker of the House of Delegates and at national level, as vice chairman of the AMA Committee on Maternal and Child Care and as a member of the AMA Commission on Medical Practice. For 16 years, he has served as secretary of the Delta Medical Society and was the 1964 winner of the MSMA-Robins Award.

National 50 Year Club Seeks New Members

The Fifty Year Club of American Medicine, a national organization of physicians who have practiced for a half century or longer, has opened a new membership drive. This was the announcement of Dr. J. H. McCurry of Cash, Ark., secretary and founder of the organization.

Dr. McCurry said in a letter to the state medical association that "it is our desire and goal to enroll in the club all doctors who are eligible," expressing the wish that each physician in the state with the prerequisite years of practice would apply. The organization is separate from state medical association Fifty Year Clubs and usually meets concurrently with AMA annual and clinical conventions.

The Fifty Year Club of the Mississippi State Medical Association is sponsored by the Board of Trustees and has 81 members on its rolls for 1965. Together, these physicians represent almost 4,200 years of medical practice. MSMA's group meets at the annual session when the Board of Trustees honors the members at a special luncheon.

State Accredits 14 Nurse Programs

Fourteen nurse training programs in Mississippi have been accredited for 1965-66 by the Board of Trustees of Institutions of Higher Learning. Five are three year diploma programs, all based in general hospitals. Eight are junior college associate degree programs, and one is a full baccalaureate degree program at the University Medical Center in Jackson.

The five hospital diploma programs are conducted by the Mississippi Baptist and St. Dominic-Jackson Memorial hospitals at Jackson; the Matty Hersee Hospital, Meridian; the Methodist Hospital, Hattiesburg; and the Mercy Hospital-Street Memorial, Vicksburg.

Associate degree programs have been approved for junior colleges at Ellisville, Meridian, Moorhead, Itta Bena, Booneville, Poplarville, Perkinston, and at the University of Southern Mississippi Resident Center at Natchez.

The baccalaureate degree program is sponsored by the University of Mississippi as an allied professional curriculum at the University Medical Center at Jackson.

The state college board conducts not only the nurse training accreditation program but also administers nursing scholarships and assistance programs authorized by state appropriations.

MHA to Continue $80,000 Grant Program in 1966

The Mississippi Heart Association has announced its 1966-67 program of research grants-in-aid and fellowship support, according to Boswell Stevens of Macon, president. The application deadline is March 1, 1966.

Grants are made under the program to nonprofit institutions in direct support of a particular investigator for a specific program of research relating to the cardiovascular or basic science fields under his direction. Duration of the grants-in-aid is one to three years. Stevens said that applications should be directed to the Research Grants and Fellowship Committee of the heart association at Jackson.

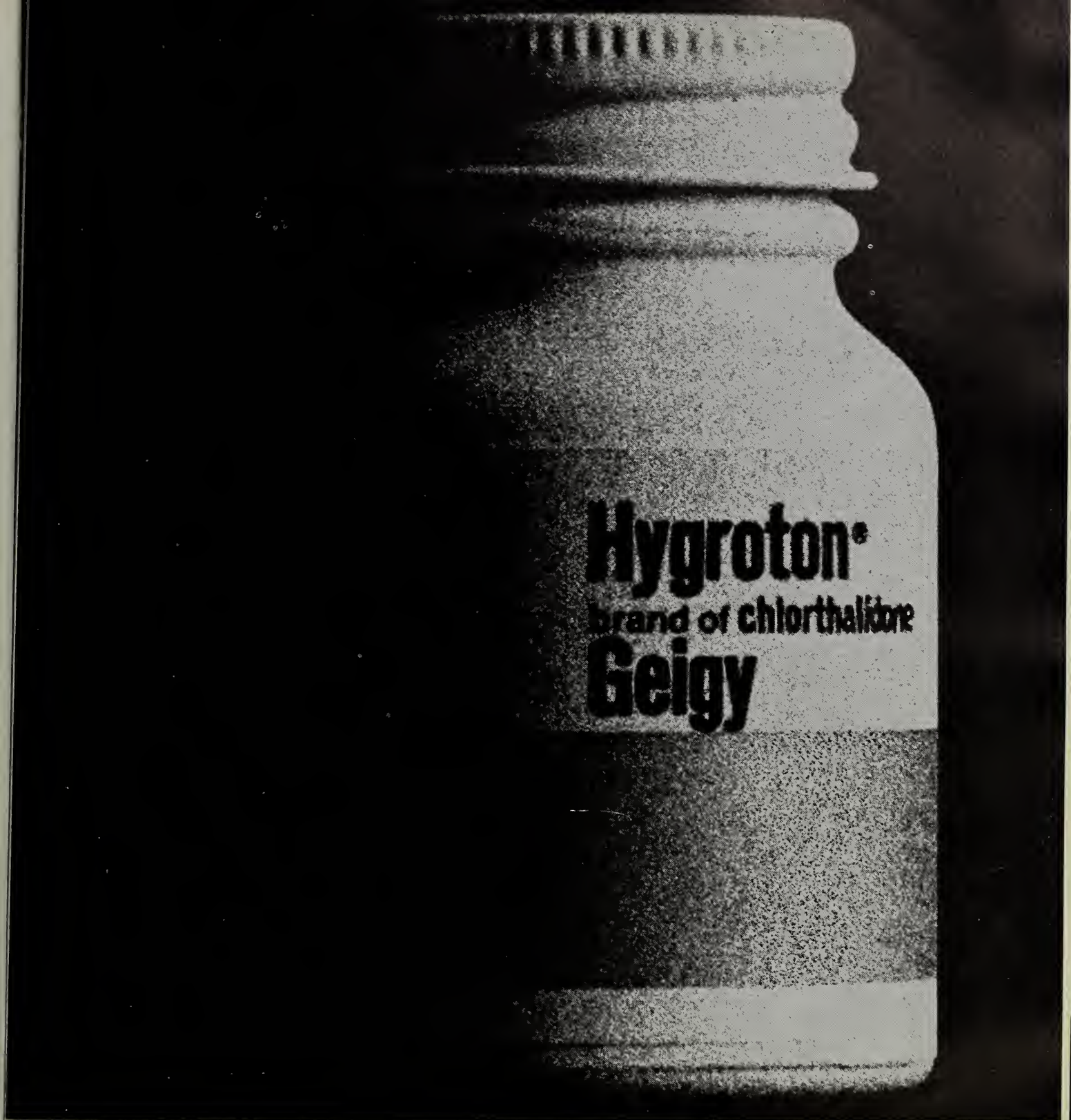
Approval will be given successful applicants about April 1, and actual awards will be made July 1.

Description: Hygroton, brand of chlorthalidone, is an oral diuretic agent of value in the treatment of edema and hypertension. The drug is notable for its prolonged action (48-72 hours) and low toxicity. It is not a thiazide and may often be employed successfully in patients who are intolerant of other agents or become refractory to them.
Indications: Hypertension and many types of edema involving retention of salt and water.
Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.
Warning: With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind.
Precautions: Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.
Side Effects: Agranulocytosis, constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, impotence, leukopenia, muscle cramps, nausea, postural hypotension, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.
Average Dosage: One tablet (100 mg.) daily with breakfast.
Availability: Tablets of 100 mg. in bottles of 100 and 1000. For full details, see the complete prescribing information.

Hygroton®
brand of chlorthalidone

The long-acting diuretic

HY-3993 PC



who needs it?

Patients with edema.
Edema in congestive heart failure.
Or in the premenstrual syndrome.
Edema in pregnancy...or obesity.
Patients you want to bring to dry weight.
And those you want to keep at dry weight.
Those you want on single daily doses.
And those requiring even fewer doses.
Those resistant to other therapy.
And those intolerant of other diuretics.
Those who have to pinch pennies.
And those who can afford the best.

During 1965, the association awarded $36,600 in grants to 16 UMC research projects. Five fellowship support awards were made in the combined amount of $25,000 to four departments at the University Medical Center in Jackson and to one department of the Ole Miss School of Pharmacy at the Oxford campus.

In addition to the $61,600 in grants and fellowships, the heart association continued its annual allocation of $20,000 for support of the chair of cardiovascular research in the medical center at Jackson.

All funds awarded are from proceeds of the annual Mississippi Heart Association campaign.

Accreditation Slated For Nursing Services

The nation's first accrediting program for nursing services will go into effect in January, 1966, under a program cosponsored by the National League for Nursing and the American Public Health Association. The program will offer League accreditation to visiting nurse services and the nursing services of health departments.

The NLN Board of Directors approved the program at its late September meeting in New York and the executive committee of the American Public Health Association board at its October 17 meeting in Chicago.

The program will focus on protecting and improving the quality of home nursing services which are expanding rapidly across the nation. These are expected to grow at an even more accelerated rate as communities extend present home nursing programs and develop new ones to provide care for beneficiaries of Medicare.

In the beginning the national accreditation service will provide preliminary accreditation for community nursing services based on a questionnaire survey of the agencies' nursing programs. The survey is designed to enable a large number of agencies to participate immediately in self-evaluation activities and to provide data on which the accreditation review board may base evaluation. This phase of the program will extend through 1968. No charge will be made to member agencies of the National League for Nursing and the American Public Health Association for preliminary accreditation.

ODMC Officials Meet at Jackson

Officials of the Office for Dependents' Medical Care of Denver, Colo., met with state medical association representatives at Jackson in October to confer over the original Medicare program which the association has administered in the state for nine years.

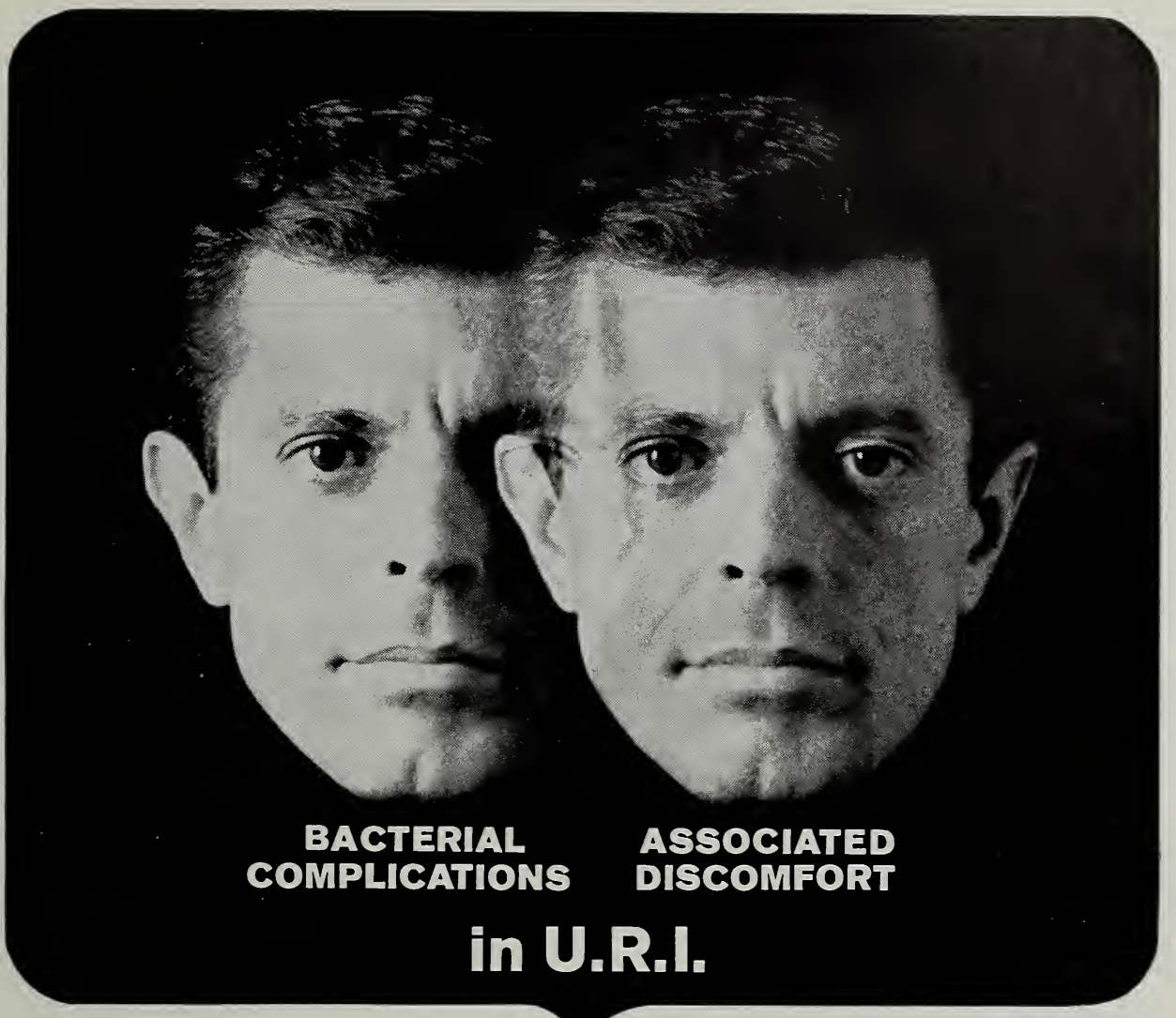
Brig. Gen. Norman E. Peatfield, executive director of ODMC, and Col. Leon E. Loll of his staff represented the Department of Defense in talks over program progress, operation, and outlook. Gen. Peatfield is a career medical officer of the U. S. Army. Col. Loll is a Medical Service Corps officer in the operations and management phases of the program.



Conferring at Jackson over the Dependents' Medical Care Programs are, from the left, Dr. Walter H. Simmons, Brig. Gen. Norman E. Peatfield, Dr. George E. Twente, and Col. Leon E. Loll. Unavoidably absent from photo was Dr. J. Manning Hudson, the association's medical member of the review board.

Members of the State Medicare Review Board, headed by Dr. George E. Twente, who met with the Defense officials, included Drs. Walter H. Simmons, ob-gyn member, and J. Manning Hudson, medical member, both of Jackson. In addition to serving as review board chairman, Dr. Twente is the surgical member. The president of the association, Dr. Everett Crawford of Tylertown, joined the group in the discussions.

Since inception of the program providing for care of spouses and dependent children of those in the uniformed services in private care facilities by private physicians, the state medical association has administered the professional service aspects for the state of Mississippi.



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Dr. Vise Is Named SMA President-elect

Dr. Guy T. Vise of Meridian was named president-elect of the Southern Medical Association as the 16 state regional group closed its 59th Annual Session at Houston, Texas, on Nov. 4. Dr. Vise will assume the presidency at the 1966 Washington, D. C., meeting.

Dr. J. Garber Galbraith of Birmingham, Ala., was inaugurated president, Dr. Oscar B. Hunter, Jr., of Washington, D. C., was named first vice president, and Dr. Mylie E. Durham, Jr., of Houston, second vice president. Dr. R. H. Kampmeier of Nashville, Tenn., 1964-65 president, was re-elected editor of the *Southern Medical Journal.*

The SMA Distinguished Service Award for 1965 went to Dr. Milford O. Rouse of Dallas in recognition of outstanding contributions to medicine. Dr. Rouse is a past president of SMA and incumbent speaker of the AMA House of Delegates.

Dr. Vise has served on the Southern's governing body, the council, and as first vice president. At state level, he is past chairman of the Board of Trustees and a past president of the association. He continues to serve as chairman of the Council on Medical Service.

Mrs. William G. Thuss of Birmingham assumed the presidency of the SMA auxiliary. She is a past president of the AMA auxiliary.

Robert F. Butts of Birmingham was re-elected executive director of the association at the post-convention meeting of the governing board. C. P. Loranz of Birmingham, pioneer medical executive who has observed a half century of service with SMA, was renamed adviser and consultant in organizational matters. Dr. Howard A. Nelson of Greenwood continues to serve as councilor for Mississippi.

First Welch Award Made by Blue Shield

Dr. Herbert E. Klarman, professor of public health administration at Johns Hopkins University, received the first annual Norman A. Welch Memorial Award during the annual program conference of the National Association of Blue Shield Plans in Chicago October 25.

The annual award, established by NABSP to honor the memory of the late Dr. Norman A. Welch, was presented to Klarman by Mrs. Welch, who traveled from Boston to make the presentation.

Dr. Welch was active in Blue Shield at the local and national levels for many years and president of the American Medical Association when he died in September, 1964.

Klarman won the award for his book, *Economics of Health,* which was considered by the judges to be the most scholarly and meritorious contribution to the literature of medical economics in 1964-65.

The award is a medallion of solid gold embossed with a bust of Dr. Welch. In addition, $1,000 was contributed in Klarman's name to the Norman A. Welch Memorial Fund of the AMA's Education and Research Foundation.

Dr. Carter Addresses Central in January

Dr. F. Bayard Carter of Durham, N. C., distinguished obstetrician-gynecologist, will address the Central Medical Society at Jackson during the regular meeting on Jan. 4, 1966. The lecture will honor the memory of the late Dr. Carl E. Lewis of Jackson. Dr. Carter's topic will be "Cancer of the Vulva."

Dr. Carter served as professor and chairman of the Duke University School of Medicine's department of ob-gyn from 1931 to 1964. He continues as professor, devoting himself to teaching and research. His outstanding career has included the presidencies of American College, American Association, and American Board in his specialty discipline. He has also served as president of the South Atlantic Ob-Gyn Society and the Society of Pelvic Surgeons.



Dr. Carter

Officials of the Central Medical Society said that physician-guests from other local societies may attend but asked that reservations be made in advance through the society's executive secretary, Miss Nancy Varnado, Suite B-6, Medical Arts Building, 1151 N. State St., Jackson.

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The letters used to explain in which department the matter indexed appears are as follows: "E," Editorial; "N," News; "L," Letters to the Editor; "BR," Book Reviews; the asterisk (*) indicates an original article in the JOURNAL, and the author's name follows the entry in brackets. "Deaths," "Personals," and "New Members" are indexed under the letters "D," "P," and "M" respectively.

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